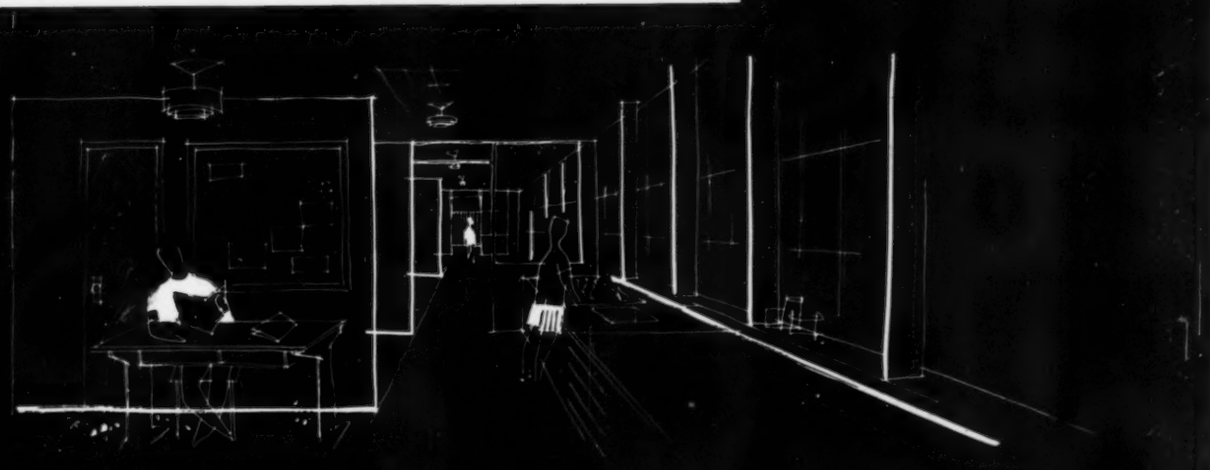
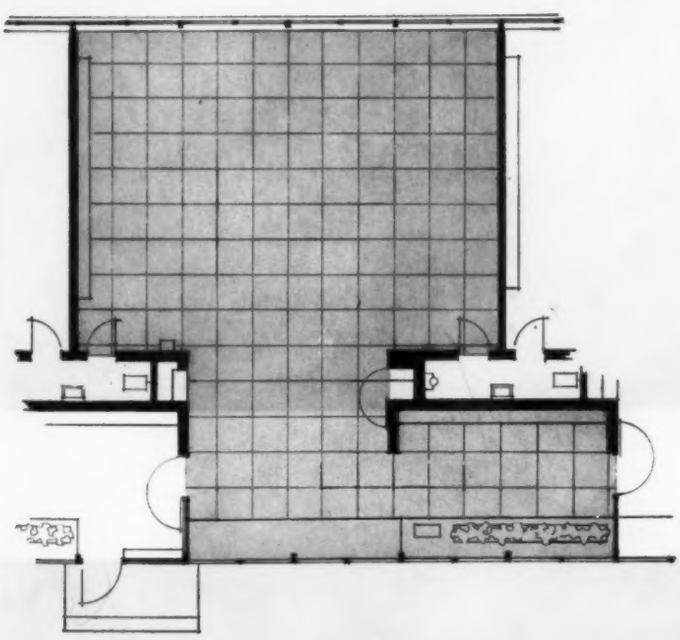
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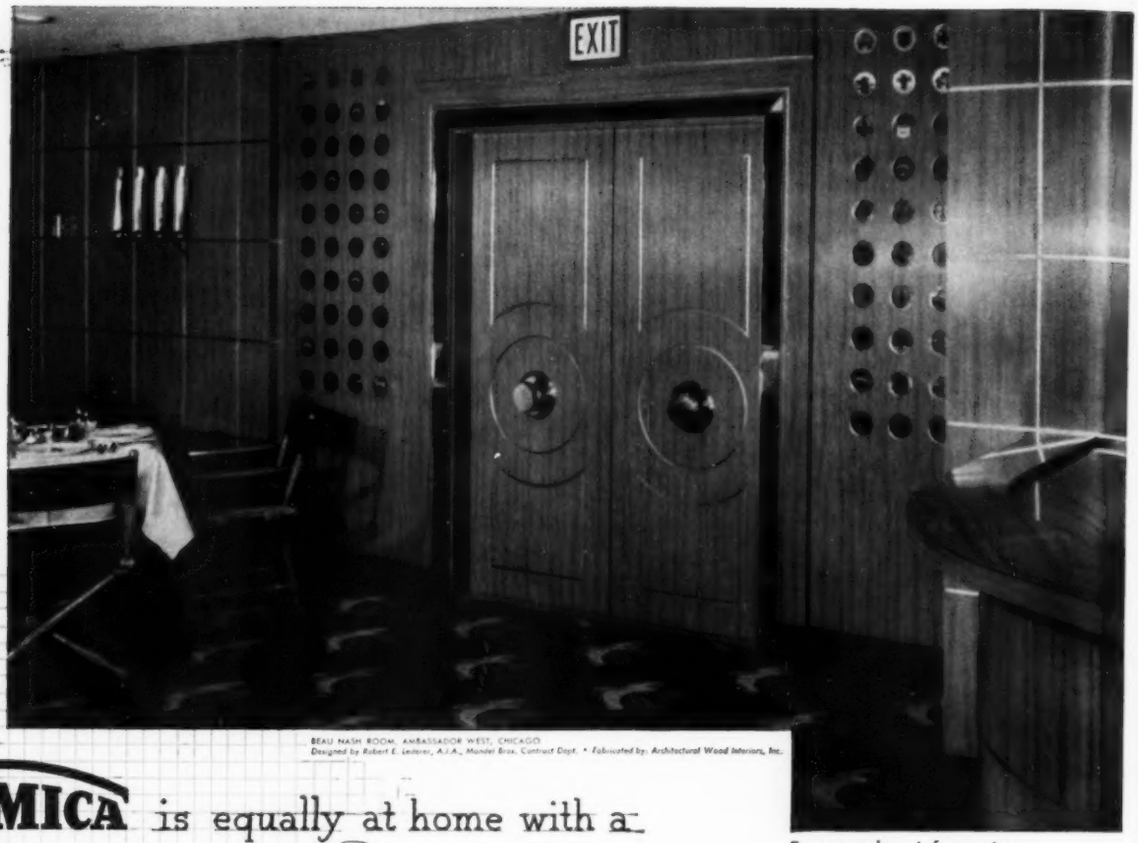


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202



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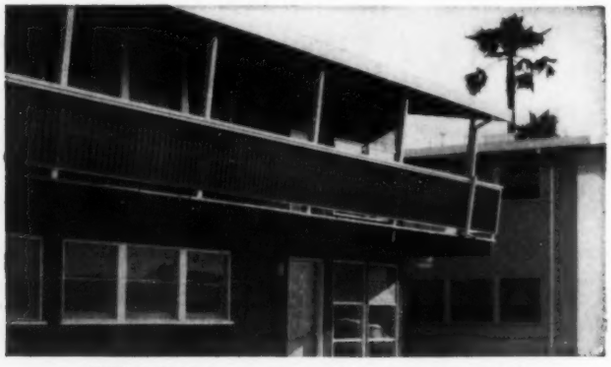
COVER

Plan of a corridorless classroom; Eberle M. Smith & Associates, Architects. Sketch by Tom Ballenger.

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PERSPECTIVES

COMMENTS-ON-U. N.-ARCHITECTURE department: "Topnotch!"—Tourist Harry S. Truman of Independence.

MILESTONE: To Frank Lloyd Wright, Taliesin, Phoenix, Ariz., went License No. C-1611, permitting him to practice in the State of California. No. 1611 is the last license on the most recent supplement to the Roster of California Architects.

ART AND GOVERNMENT is the title of a report to the President by the Commission of Fine Arts on the activities carried on by the Federal Government in the field of art. It is based on a survey initiated by the Commission in 1951 at the request of the President and includes, in addition to recommendations by the Commission, summaries of testimony at Commission hearings by representatives of 20 Federal agencies; reports from six states and 11 municipal art commissions; views of private institutions and organizations in the field of fine arts, organized as "The Committee on Government and Art," and serving, at the Commission's request, as members of an Advisory Panel of Experts; and information from members of four foreign embassies on the carrying on of art activities under government auspices in their respective countries. The 141-page report, which has just been published, comes out squarely against any "centralized control of art activities on the part of the Government such as exists in many countries" and the Commission "is opposed to efforts to create a Ministry of Fine Arts or to combine in a single bureau art activities now carried on effectively in a number of Government agencies." The Commission strongly recommends that its own function continue to be advisory only; on the other hand, it objects to any change in its independent status (under one of the proposed Government Reorganization plans, it would be grouped with several other agencies under the General Services Administrator). Recommendations include specific suggestions for each of the separate Federal agencies concerned with the arts. The Commission was established by the Congress in 1910 to advise on District of Columbia development and, at the request of the President or the Congress, to "advise generally upon questions of art." Members, appointed by the President for four-year terms, serve without compensation except for travel expenses to Washington, where they meet for one or two days each month. Present members of the Commission are David E. Finley, chairman, Joseph Hudnut, Edward F. Neild Sr., Felix W. de Weldon, Pietro Belluschi, Elbert Peets, George Biddle, and H. P. Caemmerer, secretary.

INTERIORS-INTERNATIONAL is the theme announced by the New York Chapter of the American Institute of Decorators for its floor at the National Homefurnishings Show in New York's Grand Central Palace September 17–27. And the entire show, according to Director S. Robert Elton, "will tie in with the general theme that design and decoration in this country have stemmed from the influence of many nations." Haven't they HEARD?

MAKE IT "BANAL": A "text" by Auguste Perret for a recent issue of the Swiss periodical *Habitation* reads (in translation) in part as follows: "[The architect] must not cling too much to the new fads (or fashions) for as Gide said: 'What will appear soon the most antiquated, is what first will have appeared the most modern; each facile whim, each affectation heralds a wrinkle.' . . . The architect who, without betraying the modern requirements of a program or refusing the use of contemporary materials, would produce a work which would seem always to have existed, a work which would be, in a word, banal, he indeed could hold himself satisfied."

AC'CENT ON INTERIORSCAPE, NO-JOB-IS-TOO-SMALL department: The landscape architects keep bewailing the fact that too few people realize there's more to landscape architecture than gardens. Well, the story on pages 167–171 is a reminder that there can also be a good deal less. Architect Francis J. McCarthy credits Eckbo, Royston and Williams as "landscape architects" on this office and showroom for Ac'cent, where "landscaping" is confined to three planting boxes with 20 plants or so. The interiorscape is not to be taken lightly, however. In contrast to the rather careful use of planting in the Ac'cent job, interior "landscaping" has too often turned out to be a rubber plant set down in the corner or a couple of pots of ferns near the entrance to the lobby. In the well-known trend to indoor-outdoor living, the indoors has been brought outdoors far more successfully than the outdoors has been brought in.

VULNERABILITY TO ATOMIC ATTACK: The chairman of the Senate Foreign Relations Committee, Senator Alexander Wiley of Wisconsin, has joined the cry for more information for Americans on their "terrific vulnerability to atomic attack" and calls on the Administration to explain "precisely what we must do to reduce that vulnerability and how fast and how much." Senator Wiley puts the subject on the "must" list for the next session of Congress.

NEEDED: LIBRARIES FOR 24 MILLION. A recent survey by the New York State Library, in cooperation with 40 of the 48 state librarians, showed that 24 million persons in this country have no public library service of any kind; more than 53 million do not have easy access to books. State librarians reported that construction of new public libraries has not kept pace with the demand: in 20 states, fewer than nine library buildings have been erected since 1942.

THE TRUTH ABOUT ARCHITECTS: PUBLIC RELATIONS GOAL

In June 1952, the 84th national convention of the American Institute of Architects voted to spend $100,000 on a three-year program planned to build public understanding and appreciation of the vital role of architecture in the life of every community. The program got under way in January of this year, with Ketchum, Inc., of Pittsburgh, as professional public relations counsel and the A.I.A.'s own Public Relations Committee watching over all. During the first eight months of the program, Ketchum's public relations manager, Walter M. Megronigle, and its A.I.A. account executive, Anson B. Campbell, have traveled more than 17,000 miles to meet with A.I.A. groups from coast to coast. Now the RECORD has asked for a progress report and a summary of what's to come.

By Anson B. Campbell

THE KEY PROBLEM on which the current three-year public relations program for the American Institute of Architects is based gives all evidence of being unchanged eight months after its inaugural — but 109 chapters in the A.I.A.'s 12 regional districts have begun a vigorous attack on public ignorance of architects and architecture. The problem is no conglomeration of small professional bothers or client-architect frustrations; it casts a broader shadow of national proportion.

Our nation is growing fast and its people are constantly being hit with a barrage of propaganda and sales material from a thousand sources. The era of the gimmick, the plug and the angle is, for better or worse, very much with us. The architect — a valuable member of any community in which these pressures operate — has too often found himself lost behind his own professionalism, unwittingly allowing himself and his profession to be thoroughly misconstrued, if not forgotten, by the very community he serves. Now he has become convinced that he cannot expect the public to respect his profession or appreciate his services unless he makes some concentrated and well-planned national effort to bring about understanding.

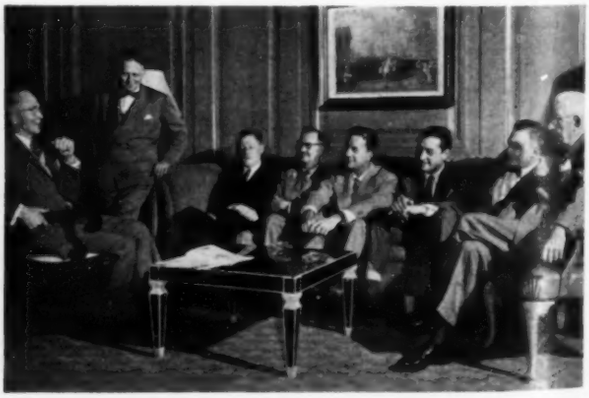
The Institute's almost 10,000 members are a task force in a program with these purposes: (1) to make an ever-changing public realize that the architect as an individual and as an organized group can be of great service to the community; and (2) to make the public aware of what the architectural profession is and what an architect is trained to do, in order to overcome the general misunderstanding about the scope and cost of architectural services.

Recognized as the immediate audience for any public relations activity by the architect is the community served by his own A.I.A. chapter. The architect should, by his training and position, be a leader in the community which he helps build. In a new society-on-the-go, he can no longer remain a stranger in his own hometown. Each architect stands for his profession, both in his business and his social relationships. And to the man on the street, the architect must reveal himself as more than a dispenser of blueprints, without ever seeming to be a lofty professional with "expensive" ideas.

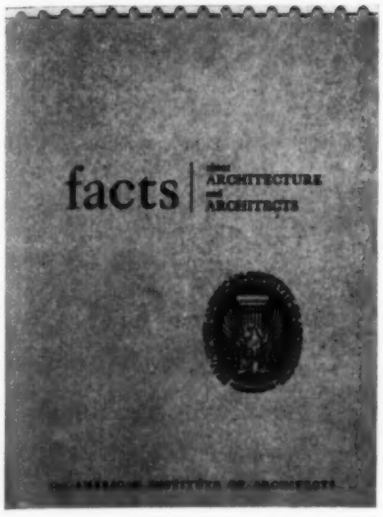
The community in which the architect works, as businessman and citizen, must be told by architects themselves the value of architectural services, those which insure good design and good construction, convenience and comfort because of careful planning, ease of securing a mortgage loan at a good rate, money's worth in material and labor, low operation and maintenance cost.

The architect's own participation in community affairs is a sound foundation





The *dei ex machina* of A.I.A. public relations program are (at left above) Ketchum Inc.'s Anson B. Campbell and (at lectern) Walter M. Megronigle; and (at right) the A.I.A. Public Relations Committee: (left to right) John W. Root, chairman; Harold R. Sleeper; Edmund R. Purves, A.I.A. executive director; Herbert C. Millkey; Karl F. Kamrath; Francis J. McCarthy; Frank N. McNett; and Maurice J. Sullivan, A.I.A. treasurer







The "tools" so far developed to help the program along—"facts package" for distribution to public opinion channels; the public relations workshop—photo shows Texas session; and the monthly newsletter. Handbook on public relations for individual architect will be distributed this fall

for his own good relations with the public. Civic commissions need his experience in an advisory capacity; and there is a crying need for him in community planning, especially in the growing field of urban redevelopment. As a member of civic groups, he not only serves the community, but becomes known in the community for his service, and in that way makes his profession known and understood — and in the right context.

The first step we took toward more community understanding was the issuance of a "Facts Package," a ready-reference about the architect, his education, his professional usefulness and his national organization, the American Institute of Architects. Copies have gone to newspapers, magazines, radio and TV stations, and other public opinion channels. In the majority of chapters, members deliver these personally to the source, meeting editors and program directors, offering them help on future articles or projects involving the architect or any facet of building.

Last February, at the request of the chapters, a series of Public Relations Workshops was instituted. These were originally planned for this fall, but because so many A.I.A. groups were eager to start off on the new program with workshop discussions, we revised the schedule and Mr. Megronigle and I covered some 17,000 miles from coast to coast in our first series of workshop sessions during the spring and early summer. This month the workshops will begin again in regions not covered earlier this year, their extent to be determined by present budget limitations.

In programming the workshops, as in all steps in the national program, we worked under the guidance of the A.I.A.'s Public Relations Committee. This includes Chairman John Wellborn Root, Chicago; Vice Chairman Francis Joseph McCarthy, San Francisco; Karl Kamrath, Houston; Harold R. Sleeper, New York; Herbert C. Millkey, Atlanta; Frank N. McNett, Grand Island, Neb.; and Maurice J. Sullivan, Houston (ex-officio). Valuable, too, in all public relations activity is Edmund R. Purves, executive director, with his headquarters at the Octagon in Washington.

The public relations workshops serve as meeting grounds for us as public relations counsel, not only with regional and chapter officers, but with other A.I.A. members as well. At these sessions the national program is outlined and public relations recommendations made for chapter action. Regions differ, of course, in their specific problems, but generally, recommendations consist of a minimum program wherein the chapter establishes a basic list of chapter publications; works at establishing better relations with public opinion channels in the community; completes and uses a "thought-leader" list for direct mail contact; and undertakes committee work for community action. The maximum program, scheduled for chapters more advanced in organized public relations, adds a one-day conference of idea-exchange between architects and leaders in the chapter area's business and social fields and suggested public relations use of exhibits, speaker's bureaus and advertising.

Used as a clearing-house for public relations action across the nation is another public relations tool, the "AIA Public Relations Newsletter," issued monthly since April to every member of the Institute. In its pages can be found such notes on chapter public relations activity as these:

"For the past three years the Southern California Chapter has produced a column titled *Architects' Corner* in the Sunday Real Estate section of the *Los Angeles Examiner*. A call on the real estate editor of your own community newspaper might find him responsive to some help on his Sunday or Special Home section. Present your ideas not as an individual architect seeking publicity but as your Chapter interested in community betterment. . . ."

"Paid attendance at the Cleveland Chapter's annual House and Flower Show was a record 204,000, of which show officials estimate 75 per cent toured the houses, saw examples of the architect's professional usefulness. . . ."

"What is the Role of the Architect in Community Building? was the subject of a recent panel discussion on *The Pittsburgh Story* (WDTV), winner of *Variety's* 1950–51 Show management Review Highlight Award. Jack Franklin, Rody Patterson and Tom Pratt, all of the Pittsburgh Chapter, told TV viewers why and how to engage an architect, what architects were doing in that city's building boom. . . ."

"A direct result of the Pasadena Chapter's public relations program is some excellent publicity-aid from the First Federal Savings and Loan Association in Pasadena. That Association was

(*Continued on page 324*)

OPINION

Editor, ARCHITECTURAL RECORD

I am enclosing a copy of a statement made by Rene d'Harnoncourt, Director of the Museum of Modern Art, in answer to Frank Lloyd Wright's article, "In the Cause of Architecture."

We hope very much that you will be able to publish this statement, especially considering that Mr. Wright's point of view was published in the June issue of ARCHITECTURAL RECORD.

Elizabeth Shaw
Acting Publicity Director
Museum of Modern Art

The statement follows:

Mr. Frank Lloyd Wright recently published a statement under the title: IN THE CAUSE OF MODERN ARCHITECTURE, in which he denounces the International Style of architecture as an "evil crusade" and a manifestation of "totalitarianism." He then goes on to accuse the Museum of Modern Art of having made a "sinister attempt to betray American Organic Architecture," and offers the Museum's exhibition and book, BUILT IN U.S.A.: POST-WAR ARCHITECTURE, as a proof of the Museum's activities as a "professional publicist" for the International Style. This calls for rebuttal and factual clarification.

It is self-evident that Mr. Wright speaks as a leading exponent of what he defines as organic architecture. It is therefore worth noting that the Museum, far from betraying Mr. Wright and what he stands for, has always acknowledged him publicly as America's greatest architect. The Museum has held fourteen exhibitions in which Mr. Wright's work was represented — six of these were devoted exclusively to his work and one was the largest architecture show given at the Museum of Modern Art. Thus the Museum has given him more one-man shows than it has given not only to any other architect, but to any creative artist. In both its exhibition and its book on American post-war architecture, Mr. Wright again was given the place of honor which he deserves. It also is pertinent to point out here that all the architects whom Mr. Wright associates by name with organic architecture — namely Richardson, Sullivan and Root, have been honored by the Museum since the inception of its Department of Architecture.

The Museum's responsibility is to help the public to know and appreciate the work of the creative artists of our time, and to bring to its attention significant trends in modern art. Unlike Mr. Wright, we believe that the International Style was such a trend. Twenty years ago the Museum first applied the term International Style to a kind of architecture which, partially under Mr. Wright's influence, was emerging simultaneously in several different countries. As described by the Museum, the International Style was characterized by light and spacious volumes rather than by heavy masses, by fresh exploration of function and structure, and by a sense of order enriched by beauty of proportion and perfection of technique rather than by superficially applied ornament. The Museum believes that several architects associated with it have done highly individual and magnificent work.

We strongly deny the sinister motives Mr. Wright ascribes to the International Style and we will, of course, continue to present the work of the architects who carry on its tradition together with distinguished work by other architects. By the same token, Mr. Wright's attacks will not diminish our admiration for him as a great artist and builder.

(signed) Rene d'Harnoncourt, Director
Museum of Modern Art

Editor's note: "In the Cause of Modern Architecture" was a somewhat revised version of "The 'International Style'," excerpts from which, with a letter from Mr. Wright, were published in the June issue of ARCHITECTURAL RECORD *(page 12).*

MILITARY BUILDING GETS $490 MILLION FOR 1954

By Ernest Mickel

A MILITARY PUBLIC WORKS PROGRAM of $490 million finally emerged from the first session of the 83rd Congress. The breakdown by services:

(in $ thousand)

	In U. S.	*Overseas*	*Total*
Army	$113,111	$20,560	$133,671
Navy	61,687	25,324	87,011
Air Force	267,267	2,242	269,509
Total	$442,065	$48,126	$490,191

These amounts are authorizations — not appropriations — for the fiscal year 1954 ending next June 30. They compare with fiscal 1953 authorizations of $2398.3 million. The office of Director of Installations Frank R. Creedon of the Defense Department noted these features:

1. While the authorization is some 92 per cent of the amount requested of Congress by the Secretary of Defense, it is only 10 per cent of the military departments' initial request to the Secretary. The preliminary screening in Mr. Creedon's office had eliminated $2512 million from the Air Force request; $1204 million from the Navy's; and $482 million from the Army's.

2. No additional appropriations were required — carryover of funds takes care of it.

3. This Authorization Act rescinds existing authorization in an amount greater than the new authorization granted.

4. The Act imposes unit cost limitations on certain items.

5. Cost variance allowed at individual stations is held at five per cent at U.S. stations instead of 10 per cent.

Construction authorization was rescinded for $757 worth of projects — $271 million for the Army, $85 million for the Navy and $401 million for the Air Force; the total rescinded exceeded by $267 million the new authorization.

These cost limitations were imposed on construction within the continental United States: $20 per sq ft for cold storage warehousing; $6 per sq ft for regular warehousing; $1700 per man for permanent barracks; $1400 per man for 10-year-life barracks; and $5000 per man for bachelor officers' quarters.

Mr. Creedon's office said unobligated funds on July 1 amounted to about $900 million for the Army, $460 million for the Navy and $1941 million for the Air Force.

UNESCO Plans Approved

WORKING DRAWINGS are being started on the Paris headquarters building for the United Nations Educational, Scientific and Cultural Organization in an office at 9, Rue Arsène Houssage, Paris VIII. Meeting in extraordinary session this summer in Geneva, the UNESCO General Conference approved a resolution authorizing its Director-General to accept the second Breuer-Zehrfuss-Nervi scheme (ARCHITECTURAL RECORD, July 1953, pp. 10–11) and the Place de Fontenoy site offered by the French Government and to proceed with construction "at a total cost not to exceed $6,000,000." A Committee of Art Advisers is to be established to plan the "artistic decoration" of the building and to suggest the names of artists who might contribute to it. Three American architects are working in the Breuer-Zehrfuss-Nervi Paris office — Seymour Howard, on leave of absence for a year from his association with Huson Jackson of New York and teaching at Brooklyn's Pratt Institute; Peter Kowalski, also of New York; and Robertson Ward, who has been in the Tokyo office of Skidmore, Owings & Merrill. Mr. Breuer himself will continue commuting back and forth across the Atlantic as he has been doing since June.

FCDA to Architects/Engineers

THE RESPONSIBILITY OF THE ARCHITECT and engineer in civil defense was analyzed in a talk by Director A. D. Morrell of the Engineering Office of the Federal Civil Defense Administration at a recent engineering conference sponsored by FCDA. The technical problems raised by an atomic attack are divided into three time phases, Mr. Morrell said — the pre-attack period, the emergency operational period immediately preceding, during and following an attack, and the restoration or post-attack period. As outlined by Mr. Morrell, *pre-attack action* with which architects and engineers should be concerned includes urban analysis, dispersion of industry and manpower, protective design and construction, shelter design and construction, formation of emergency operational plans and transportation studies; *engineering emergency operations* would include debris clearance, provision of hospital and first-aid stations, emergency water supply, sewage and refuse problems, emergency power, communications, transportation, provision of gas, and mass burial; *post-attack problems* would include urban redevelopment, reconstruction of industry, housing repair and reconstruction, commercial reconstruction, highway and street repair, public building reconstruction, water supply and other utilities.

Code Acceptance Mounts

SOME 560 COMMUNITIES now have adopted the model national building code, the National Board of Fire Underwriters reports. Sixty-five communities were added to the list during the last fiscal year. The code permits use of any material, type of assembly, method of construction or style of architecture that meets the required standards of strength, stability and fire resistance.

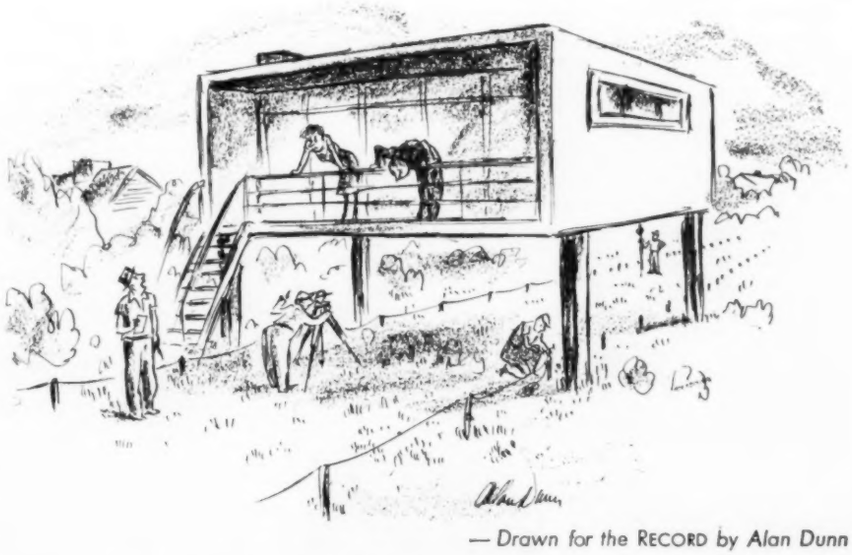
A.I.A. Group in Germany

EIGHT AMERICAN ARCHITECTS selected by the regional directors of the American Institute of Architects in response to an invitation from the German government have been studying the reconstruction problems which faced Germany following World War II. The group, which left early last month to spend about a month as guests of the West German government, was to concentrate its observations on postwar housing construction, which has been estimated at $700 million. Arthur E. Fehr, Austin, Tex., is the group's leader, with Frederic A. Pawley of the Washington, D. C., staff of the A.I.A. acting as team secretary. Others in the group: C. M. Deasy, Los Angeles; C. Curtiss Inchow, Columbus, Ohio; Angus McCallum, Kansas City; A. G. O'Dell Jr., Charlotte, N. C.; Richard W. E. Perrin, Milwaukee; and Thomas S. Hargis, Jr., Yakima, Wash.

(*Continued on page 16*)

Stock School Plans: "38 States Say No!"

THE SIXTH in the American Institute of Architects series of *School Plant Studies* provides some data encouraging both for the cause of good school design and for architects who design schools. "Stock Plans for School Buildings: A National Survey" reports only 10 of the states still using (limited) stock plans. Of the 38 who do not use them, 15 formerly used and have now abandoned them; 23 never used them. The paper, published in the January-February 1953 issue of the A.I.A. *Bulletin*, is based on a telegraphic survey of all 48 state departments of education made in November 1951 by the A.I.A. Committee on School Buildings, headed by William Caudill.



— Drawn for the RECORD by Alan Dunn

"We're putting a new road through here, lady, but don't worry — you won't have to move —"

THE RECORD REPORTS

(*Continued from page 15*)

A.S.T.M. Okays 63 Standards

THE AMERICAN SOCIETY for Testing Materials at its 1953 annual meeting approved 63 new standards, bringing the total of A.S.T.M. standards to 1965, compared with the total 20 years ago of 690 and 10 years ago of 1200. Also at the annual meeting, revisions of 185 existing tentatives and standards were acted on. All of the new and revised standards will be published later in the 1953 Supplement to the Book of A.S.T.M. Standards.

"New Work in Stained Glass"

EIGHTEEN SELECTED ARTISTS and stained glass designers have contributed one panel each to an American Federation of Arts exhibition which opens September 8 in New York at the Grace Borgenicht Gallery prior to a nationwide tour which already includes Louisville, Chicago, Manchester, N. H., Corning, N. Y., Rochester, N. Y., Chattanooga, Tenn., and San Jose, Cal. The panels have been developed in a joint project of A.F.A. and the Stained Glass Association of America "to revive in this country awareness and production of stained glass." Queries to: A.F.A., 1083 Fifth Ave., New York City.

The Palace and the Shack

EVEN AS PREDICTED, the figures and the facts on the 1953 boom in residential air conditioning are little short of staggering. The Air-Conditioning and Refrigeration Institute reports that manufacturers' shipments of room air conditioners during the first half of 1953 increased 215 per cent over the same period a year ago. As for the outlook, the chairman of the Air Conditioning Committee of the National Association of Home Builders, Ned Cole, told a recent meeting of the committee that a $750,000,000 residential air conditioning industry — a tenfold advance — is in the making and may be attained within the next three or four years. The possible range of future customers may be suggested by two recent news items: in Tokyo, Emperor Hirohito planned to have his living quarters in the Imperial Palace completely air conditioned; and in Miami Beach, it was reported that the Algiers Hotel site has an air conditioned construction shack.

Power Plant of the Future

THE FIRST International Conference on Atomic Power for Industrial Uses was held last month in Oslo and delegates saw the first public showing of a recently declassified U. S. Atomic Energy Commission film on the "experimental homogenous reactor" at Oak Ridge, Tenn., which is considered the pilot model for the atomic power plant of the future.

The Cost of a House

A HOUSE that costs $6127 in Long Beach, Cal., may cost $9117 in Cleveland, Ohio; but there is no geographic pattern in cost variations, and size of community appears to have less effect on cost than other factors, such as labor practices, availability of raw materials and relative distribution or shipping costs. A recent survey by the Underwriting Division of the Federal Housing Administration of the costs of constructing a standard house in each of 70 U. S. cities showed a cost range in 41 of the 70 cities from $6000 to $7500 and in 29 cities from $7500 to $9117. The survey was based on January 1953 replacement cost estimates of an identical, one-story, two-bedroom frame house in each area served by an FHA insuring office.

Cost estimates included materials, labor, subcontracts, workmen's compensation insurance, public liability insurance, unemployment insurance, social security tax, sales taxes, incidental job costs and general overhead and profit. Not included: architectural services, cost of lot, land development, carrying charges during construction, financing costs, fire or hazard insurance, ground and street improvements, driveways or walks, heating system costs. Because of setback variations, sewer, water, gas and electric connections are included only to a point 5 ft beyond the foundation walls.

Figures for the 70 cities:

Albany, N. Y. — $7928; Albuquerque, N. Mex. — $7175; Atlanta, Ga. — $6857; Baltimore, Md. — $7550; Billings, Mont. — $7409; Birmingham, Ala. — $6560; Boise, Idaho — $7050; Boston, Mass. — $7464; Buffalo, N. Y. — $8553; Burlington, Vt. — $6746; Camden, N. J. — $7476; Charleston, W. Va. — $7484; Charlotte, N. C. — $6453; Cheyenne, Wyo. — $7068; Chicago, Ill. — $8333; Cincinnati, Ohio — $7950; Cleveland, Ohio — $9117; Columbia, S. C. — $6567; Columbus, Ohio — $7950.

Dallas, Tex. — $6463; Denver, Colo. — $6942; Des Moines, Iowa — $8102; Detroit, Mich. — $7471; District of Columbia — $7383; Fargo, N. Dak. — $8242; Fort Worth, Tex. — $6821; Grand Rapids, Mich. — $7122; Hartford, Conn. — $7767; Houston, Tex. — $6942; Indianapolis, Ind. — $7579; Jackson, Miss. — $6693; Jacksonville, Fla. — $7399; Kansas City, Mo. — $7728.

Little Rock, Ark. — $6934; Long Beach, Cal. — $6127; Los Angeles, Cal. — $6152; Louisville, Ky. — $7844; Manchester, N. H. — $6434; Memphis, Tenn. — $6399; Miami, Fla. — $6644; Milwaukee, Wis. — $8573; Minneapolis, Minn. — $7479; Nassau County, N. Y. — $6863; Newark, N. J. — $7092; New Orleans, La. — $7356; Oklahoma City, Okla. — $6506; Omaha, Neb. — $8141; Philadelphia, Pa. — $7254; Phoenix, Ariz. — $6608; Pittsburgh, Pa. — $8064; Portland, Me. — $6632; Portland, Ore. — $7461; Providence, R. I. — $7521.

Reno, Nev. — $8162; Richmond, Va. — $7032; Sacramento, Cal. — $7614; St. Louis, Mo. — $7877; Salt Lake City, Utah — $7626; San Antonio, Tex. — $7362; San Diego, Cal. — $8136; San Francisco, Cal. — $7546; Seattle, Wash. — $7744; Shreveport, La. — $7641; Sioux Falls, S. Dak. — $8317; Spokane, Wash. — $7239; Springfield, Ill. — $8636; Tampa, Fla. — $7402; Topeka, Kan. — $7670; Tulsa, Okla. — $6941; Wilmington, Del. — $7643.

Architectural Hats

SALLY VICTOR is at it again — "architectural forms, orders and structures" are "one of the major inspirational springboards" (the release says) of her fall collection. Samples, with "architectural" comment by Sally Victor, are below.

"Ionic"



"Archer" ("medieval")



"Doric"



"Corinthian"



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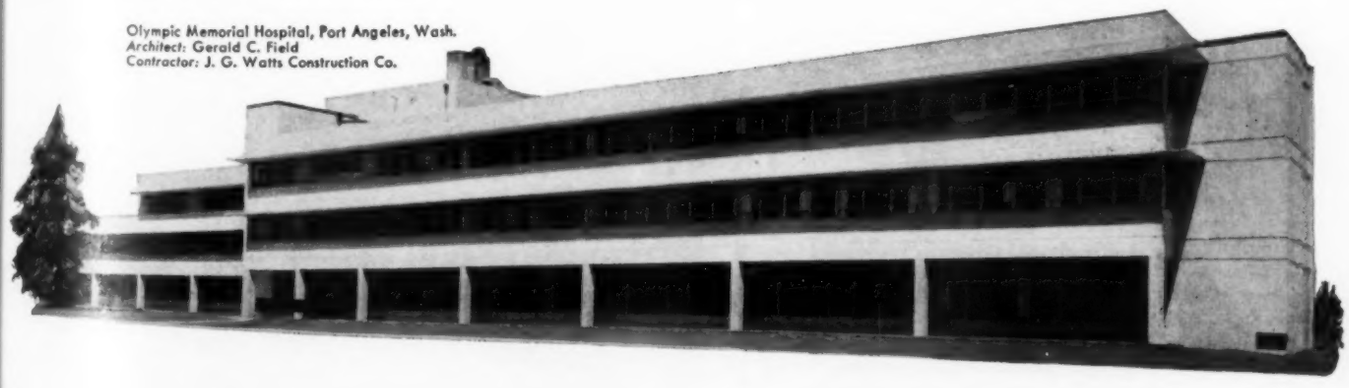
That's why aluminum windows are first choice with so many architects, administrators and "Boards."

"Quality-Approved" aluminum windows are available through many manufacturers in sizes and styles (double-hung, casement, projected and awning) to fit any design treatment. Only windows that have been tested by the Pittsburgh Testing Laboratory and approved for quality of materials, construction, strength of sections and minimum air infiltration are permitted to carry the "Quality-Approved" Seal. For your protection and full satisfaction insist on "Quality-Approved" windows when you specify.

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Aluminum Window Manufacturers Association

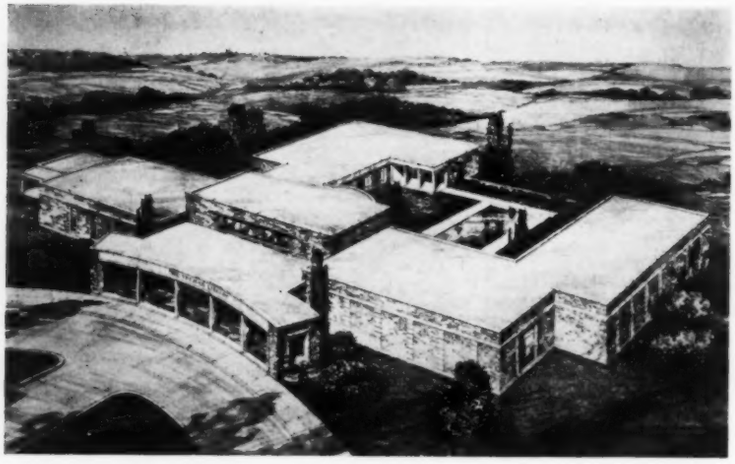
74 Trinity Place, New York 6, N. Y.



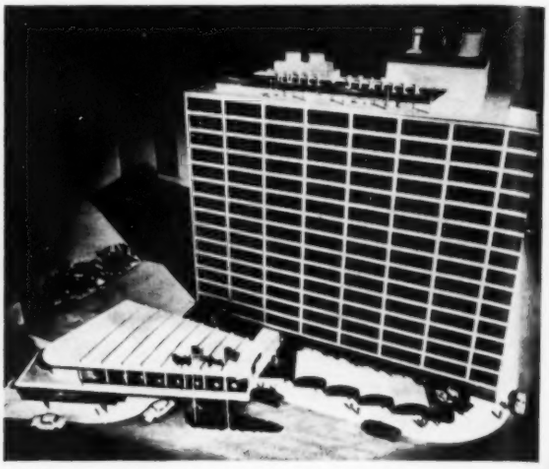
Olympic Memorial Hospital, Port Angeles, Wash.
Architect: Gerald C. Field
Contractor: J. G. Watts Construction Co.

WINDOWS

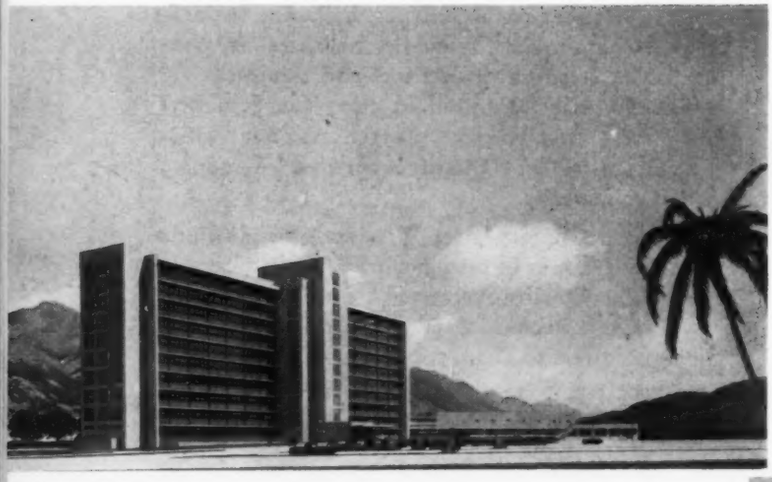
ON THE HORIZON: PROJECTS IN THE NEWS



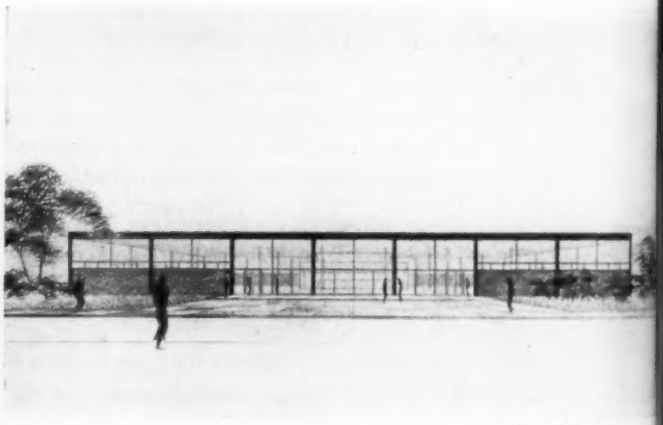
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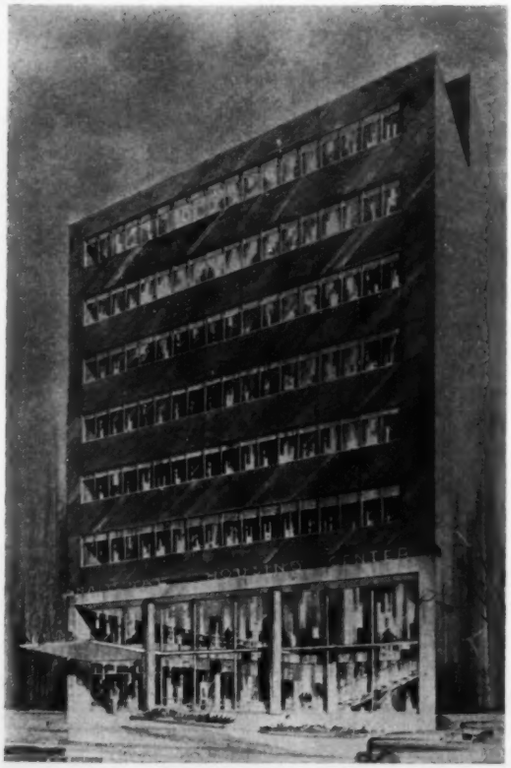
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4

Hedrich-Blessing

5



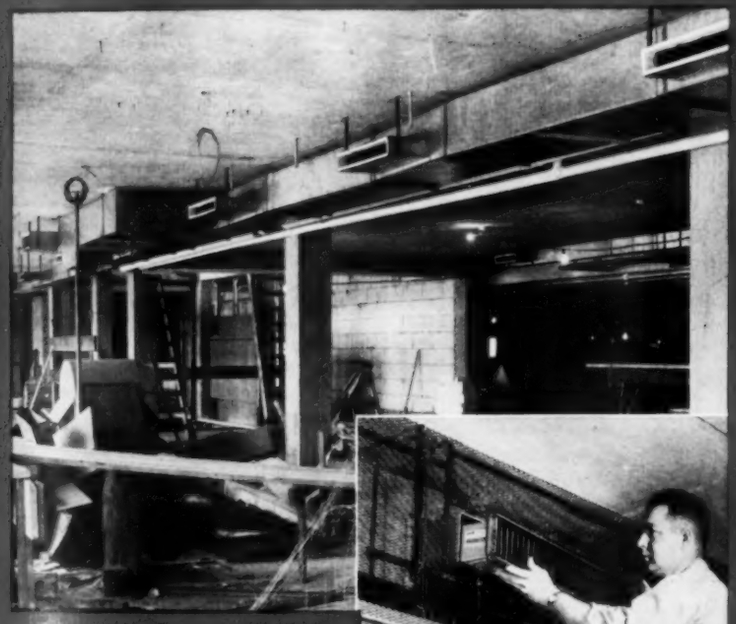
Preliminary plans have been completed for the **Harry S. Truman Library** (1) to house the archives of the Truman Administration. A 50-acre site near Grandview, Mo., is Mr. Truman's gift; $1,750,000 in contributions is sought for the building. Neild-Somdal-Associates are the architects. Completion of the 16-story **Hotel Statler** (2) in Hartford, Conn., is expected next summer. Curtain walls combine glass and porcelain-steel-faced sandwich panels only one and a half in. thick. William B. Tabler is the architect. Creole Petroleum—Venezuelan affiliate of Standard Oil of N. J.—has announced resumption of its plans for a $7.5 million **office building in Caracas** (3); shortages of building materials had led to voluntary postponement of the project, first announced more than three years ago (ARCHITECTURAL RECORD, Jan. 1949). Architect: Lathrop Douglass. Another of Mies van der Rohe's buildings for the Illinois Institute of Technology, a $350,000 **student commons building** (4) got under way this summer. **"National Housing Center"** (5) will be erected in Washington, D. C. by National Association of Home Builders as headquarters and research center. Architects: Aubinoe, Edward and Berry

Nothing succeeds like success! Trial of Barber-Colman's new high velocity system in the first floor of Allstate Insurance Company's new building led to adoption of the same system for the second and third floor addition now being built.

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(Above) **Ductwork** before installation of partitions or metal lath ceilings. Complete job required 340 Air Valves, 12 High Velocity Control Units, 207 Sidewall Diffusers and Return Grilles, 10 Air-turns. (Right) **Air Valve** and Diffuser go into place. Valve is adjusted quickly and easily with key through face of Uni-Flo Double Deflection Sidewall Diffuser.



(Above) **Meeting room** is free from disturbing air noise, yet has ample, efficiently diffused air supply for participants in group discussions. (Below) **In addressograph room,** normal air flow is distributed effectively through attractive Uni-Flo Ceiling Diffusers (individually adjustable).



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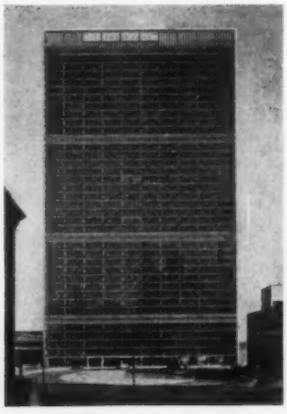
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NEW STRUCTURAL TECHNIQUES APPRAISED

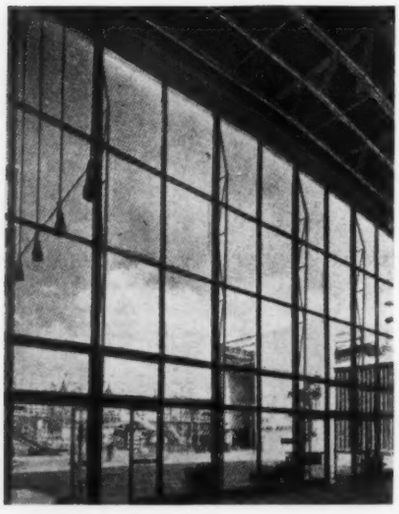


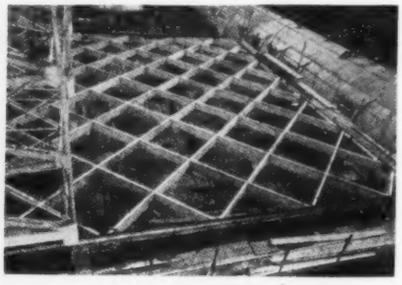


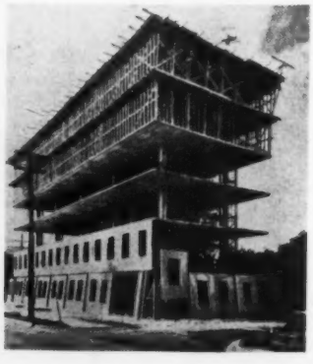




Above: a Britisher's view of American structural techniques: Mies van der Rohe's Lakeshore apartments selected for dimensional standardization (top left); General Motors Research Center office building for integration of services and structure (top right); U.N. Secretariat for simplicity of structural frame design (bottom left); tilt-up concrete slabs for reduction in form work (bottom right). Below: some hits and misses picked by another English author: Power and Production Building at Festival of Britain (left) is mostly glass—people tried to walk through glass façade; Fairway Restaurant at Festival has interesting light roof structure of post-stressed concrete joists; Five-Fifty Building in Miami, Fla. has economical precast concrete wall panels hung from floors (bottom right)







IT IS WELL KNOWN that building engineering design and construction techniques in this country are conditioned by the high cost of labor as compared with cost of materials. This is hardly understood in Europe, where the situation is exactly reversed, according to L. W. Elliott who writes on "Structural News: USA" in the April issue of *The Architectural Review*. The author takes some of our more talked about new buildings which in his opinion demonstrate the effect of prefabrication, dimensional standardization, and other labor-saving ideas (such as the lift-slab and tilt-up concrete techniques) on the layout and appearance of the buildings.

The first of his examples is Mies van der Rohe's Lakeshore Apartments. The author points out that since steel column fireproofing was uniformly sized the whole height, both windows and interior partitions could be fully standardized.

The General Motors Research Center office building is presented as an outstanding example of integration of services and structure as well as modular coordination.

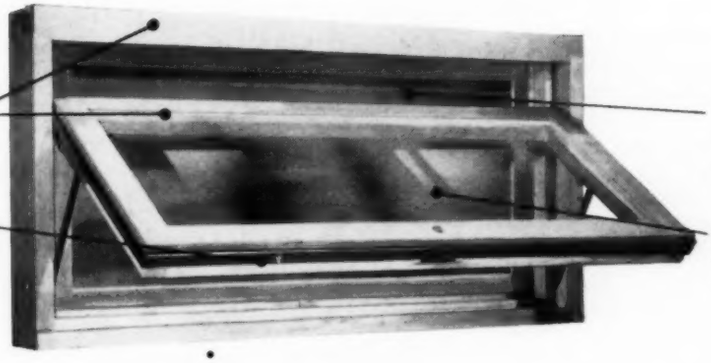
Problems of all-glass walls are discussed, using as examples Lever House and 445 Park Avenue, where a grid of standardized steel mullions was set out from the frame, making the fenestration independent.

THE FESTIVAL OF BRITAIN gave architects and engineers an opportunity to experiment more than normally with structures and materials. How these ideas worked out is discussed in an article, "Successes and Failures of New Techniques," by Howard V. Lobb in the April issue of *The Journal of the Royal Institute of British Architects*. In addition, structural systems in English schools and the Five-Fifty Building in Miami, Fla. are examined.

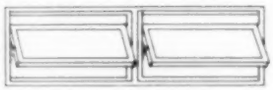
Descriptions are given of welded light steel framing supporting a glass roof, problems of installing the largest sheet of polished plate glass in the world, post-stressed concrete planks for a restaurant roof, and a huge corrugated-shaped roof made of aluminum sheet and cork insulation.

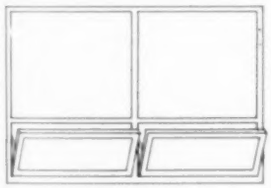
(*Continued on page 356*)

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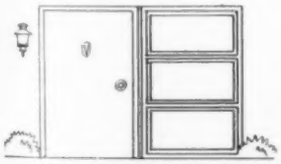


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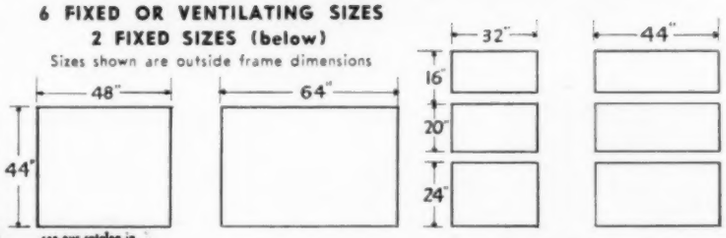

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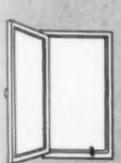
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NEWS FROM CANADA *by John Caulfield Smith*

MANITOBA STUDENT WINS PILKINGTON GLASS AWARD

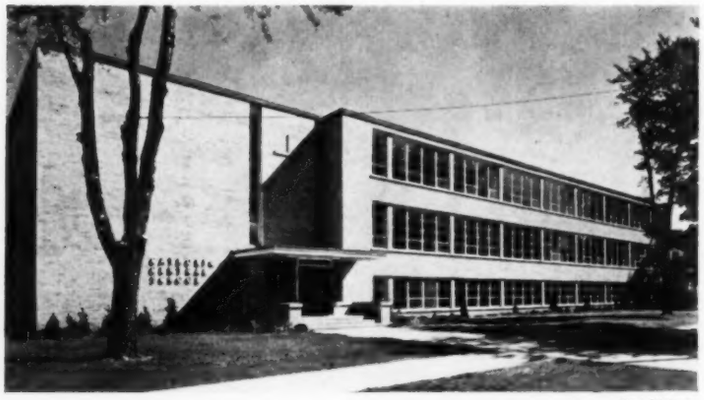
FOR THE FOURTH TIME in the seven years of its existence, the Pilkington Glass Traveling Scholarship of $1500 and return passage to study in Britain has been awarded to a University of Manitoba student. This year's winner is Jamaica-born Vayden R. McMorris, 28, for the design of a "significant and architectural setting to house representatives of the new government under the terms of a new constitution" in Kingston, Jamaica. Mr. McMorris was training as a meteorologist at the Royal Naval Air Station in Jamaica and taking night classes in building construction drawing when his drafting came to the attention of a firm of architects and contractors who advised him to seek formal training in architecture. From 1946 to 1948 he studied engineering at Mount Allison University, Sackville, N. B., and then transferred to the architectural course at the University of Manitoba.

Second prize was won by A. R. Ross of McGill University, with a design for a fine arts and architecture school. Raymond Gerald Johnston, University of British Columbia, won third prize for his design of a first offenders correctional institute.

The competition is open to architectural students at all Canadian universities with a five-year course in architec-

(Continued on page 30)

NEW SCHOOL COMPLETED AT LONDON, ONT.



Ron Nelson

CATHOLIC CENTRAL SCHOOL is located in the heart of the city and three stories were indicated to provide the accommodation required within the confines of a relatively small site. The building, erected at a contract cost of $9.80 per sq ft, provides on the ground floor cafeteria-kitchen, home economics department, general shop, offices, staff rooms and four standard classrooms; on the first floor eight classrooms, offices and a combined gymnasium-auditorium; and on the second floor eight classrooms, offices and gymnasium-gallery. Extension is possible for six more rooms at the rear.

Construction is of reinforced concrete and steel with ribbed concrete slab floors and buff face brick is backed up with hollow tile and concrete block. Exposed concrete block and structural facing tile were used extensively on the interior for "considerable savings." Ceilings are acoustic plaster in classrooms, corridors and gymnasium. Windows throughout are steel.

Charles H. Gillin of London was the architect.

VANCOUVER: OFFICE TOWER PROPOSED

Graham Warrington



Proposed office building for Vancouver would have parking facilities for 150 cars in basement, stores and banks on ground floor, and on upper floors — which occupy only a third of the site — office space subdivided as tenants desired. The building is planned on a 3 ft 4 in. module with column spacing 18 ft 4 in. by 25 ft 4 in.; all office space equally desirable, only difference being exposure. Proposed site is 264 ft by 131 ft. Estimated cost $5 million. Architect: C. B. K. Van Norman

TORONTO: ARCHITECTS ARE CLIENTS



Canada Pictures Limited

It won't be long now: contract for erection of new headquarters building for the Ontario Association of Architects is signed. Signers are Alvin R. Prack (left), vice president of the Association, and A. R. Gardiner (right) of Gardiner-Wighton, Ltd., contractors. Witnesses (standing) are John C. Parkin (left) of John B. Parkin Associates, architects, and John D. Miller (right), secretary of the Association

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CANADA
(Continued from page 26)

ture. Judges, nominated by the universities and all architects, were J. C. Parkin, Leo Venchiarutti, Maurice Payette, George K. Pokorny and Philip F. Goodfellow. Gordon Adamson was a non-voting company representative.



Photo of scale model shows layout of nine-acre Humbertown Shopping Center being built at cost of over $2 million in Humber Valley Village, Etobicoke Township, Ont. Cyril DeMara & Company are architects, G. A. McElroy (Windsor), consulting architect. Construction of Shell service station (left foreground) is well advanced; work started late in June on main building (center), which will include (from center, left to right) Loblaw's Department Store, Kresge's, Humbertown Pharmacy and Bank of Nova Scotia. Completion of first group is set for Christmas



CIVIC ROLE IS LAUDED AS TORONTO ARCHITECTS MEET

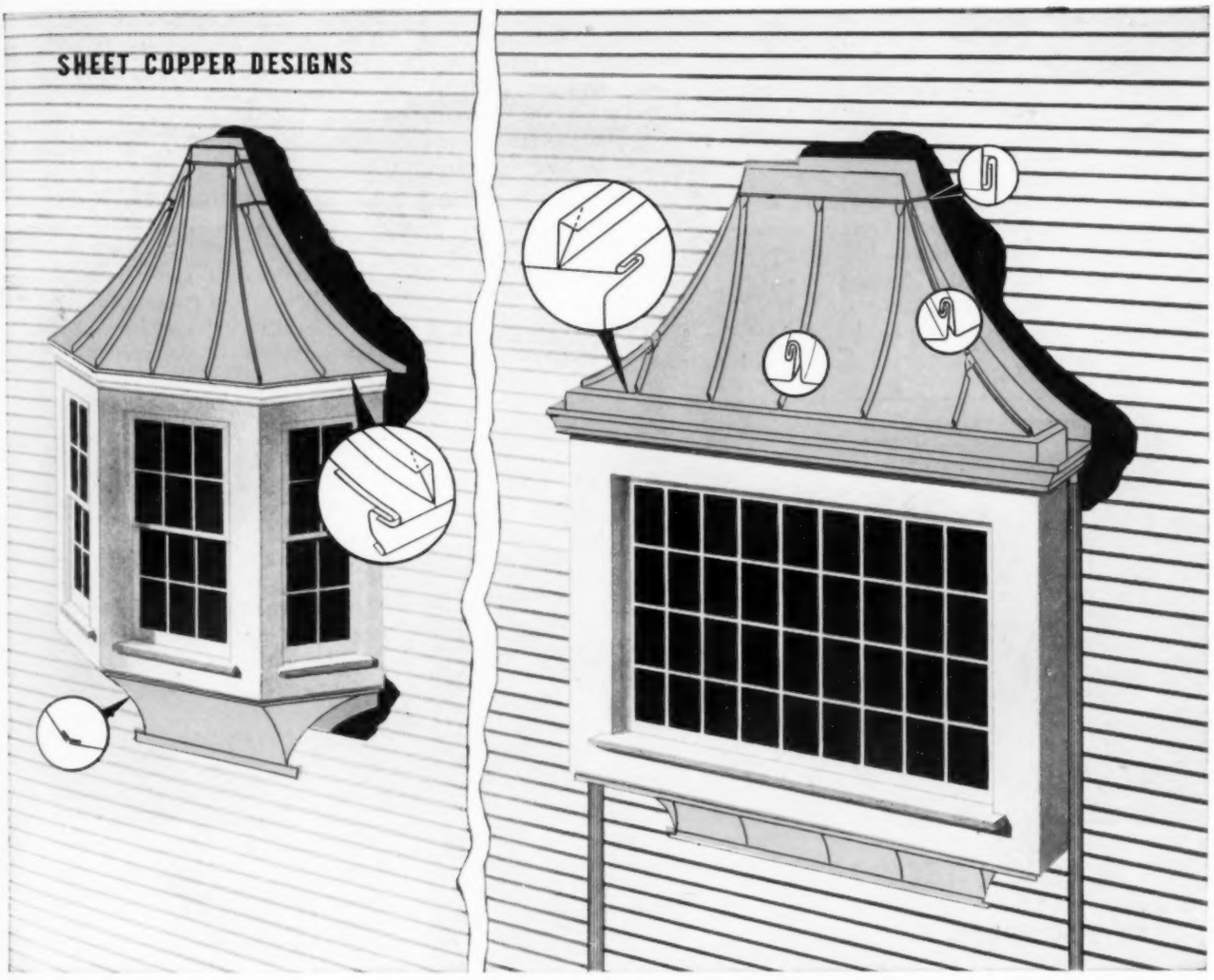
THE TORONTO CHAPTER of the Ontario Association of Architects is now the largest local organization of architects in Canada. Membership has climbed to 199, retiring chairman E.C.S. Cox announced at the annual meeting of the chapter held recently at the Royal Canadian Yacht Club, Toronto Island. Gain is about 15 per cent over '52.

Making the annual report of the executive committee, Mr. Cox described as the greatest achievement of the year recognition of the chapter as a "definite force" in the community. Through the Advisory Committee on Civic Design, he said, Toronto architects are making an important contribution to the beautification and welfare of the city: the voice of the chapter is being heard in the various civic departments.

The services of the Committee on Civic Design are placed at the disposal of the city in the following matters: siting and design of all public buildings; planning and landscaping of parks, boulevards and playgrounds; siting and design of statuary, drinking fountains, ornamental fences, etc.; the design of lighting standards, waste receptacles, traffic and other signs.

One of the most interesting projects undertaken by the committee concerns

(Continued on page 32)



"Economy Copper" Roofing for small areas offers long-lasting protection at lower cost

For the roofing of bay windows and entrance hoods, particularly where curved surfaces are involved, copper is the ideal material because of its pliability, ease of joining and soldering.

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THE RECORD REPORTS

CANADA

(*Continued from page 30*)

the making of proposals to improve the appearance of Yonge Street from Front Street north to Alexander Street. The chapter has recommended that all street lighting poles be removed and that lighting fixtures be mounted directly on the walls of buildings.

Executive committee for 1953–54 consists of G. Everett Wilson, chairman; Robert A. Servos, vice chairman; and Robert R. Moffat, Richard A. Fisher, Loren A. Oxley and B. H. M. Tedman, members. John D. Miller remains secretary-treasurer.

SIX MONTHS' BUILDING NEARED BILLION MARK

Despite a decline in June contract award figures, total awards for the first half of 1953 showed Canada's construction industry running well ahead of last year's activity.

During the first six months contract awards totaled $978,500,000 for this year compared to $904,750,000 for 1952, an increase for the half-year period of $73,750,000, according to MacLean Building Reports Ltd.

The gain was not spread over the four basic divisions of construction, however. Housing and commercial building were ahead of last year by 23 percent and 4.8 percent; but industrial and engineering construction dropped by $46,000,000 and $81,000,000 respectively.

Trade Index Available

The 1953 edition of the Canadian Trade Index, an 1170-page book providing vital statistics about some 10,000 manufacturing firms, is now available from the Canadian Manufacturers' Association, 67 Yonge Street, Toronto, at $7.50 a copy postpaid.

The Index, which also has a classified directory of many thousands of manufactured products, features a 38-page section "Canadian Industry Builds," with illustrated articles describing achievements in each of the provinces and in the Yukon and Northwest Territories.

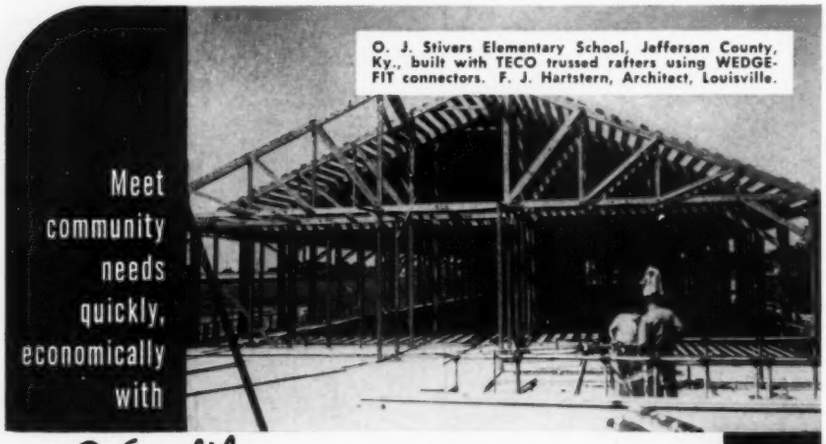


University of Alberta Builds New Theological College Unit

St. Stephen's College (above) is the first part of an additional unit for the existing Theological College on the Edmonton campus of the University of Alberta. The building provides classrooms, library, lounge, private offices for the instructors and a sound recording and broadcasting suite.

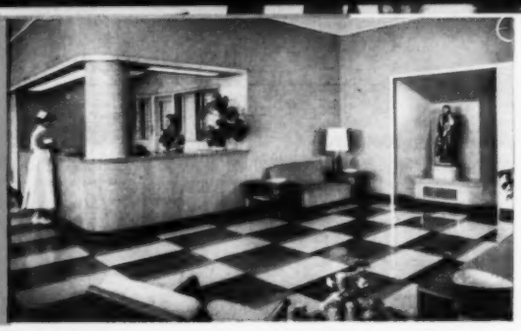
The building is of reinforced concrete design with exterior walls of brick ma-

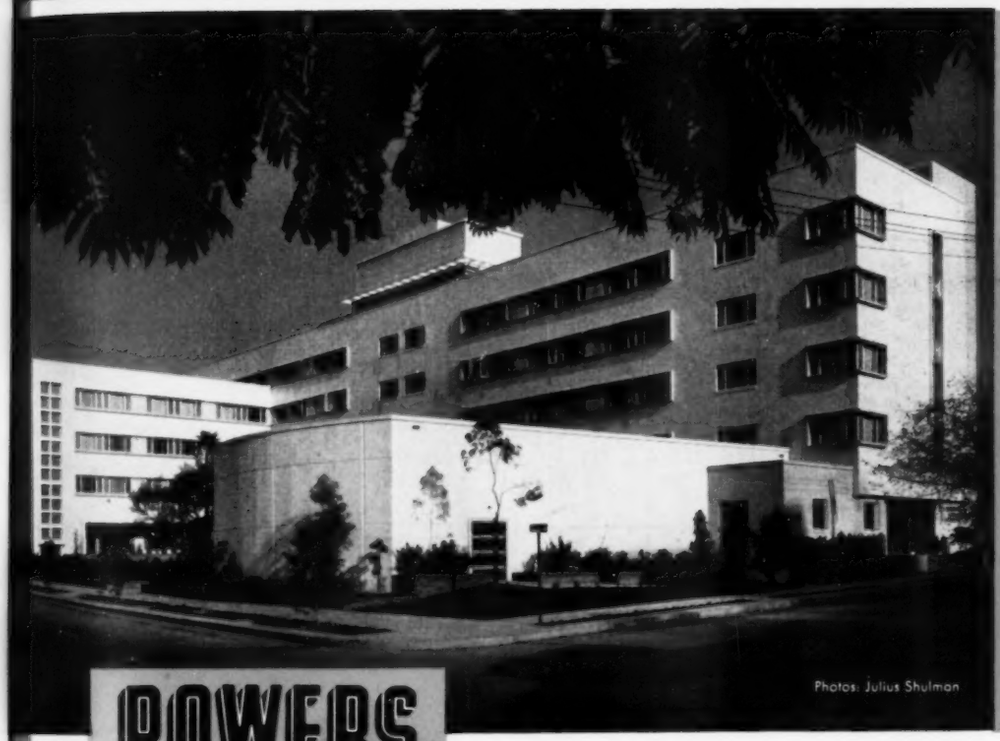
(*Continued on page 36*)











Photos: Julius Shulman

Architects
AUSTIN, FIELD & FRY

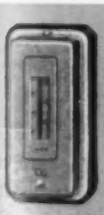
Mechanical Engineer
SAMUEL L. KAYE

ST. VINCENT'S COLLEGE OF NURSING

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SWAN PLUMBING SERVICE

All in Los Angeles, Cal.

POWERS
TEMPERATURE CONTROL



Left: Room Thermostats pneumatically operate control valves and dampers of heating system.



88 Thermostatic Water Mixers insure comfortable, safe showers, stop waste of hot and cold water.

(b17)

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One of the most notable schools designed to attract desirable students for a career in nursing is St. Vincent's $2,000,000 College in Los Angeles. Every possible modern facility for education, health, recreation and comfortable living has been provided. Quality of the mechanical equipment is on a par with the excellent design of the building.

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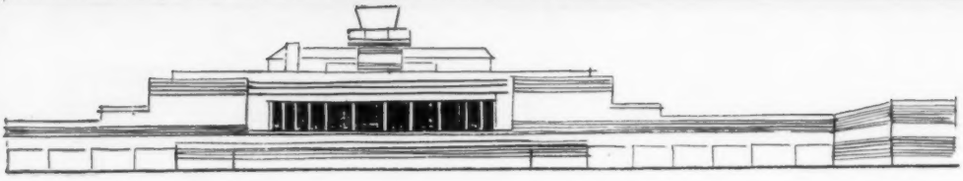
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GREATER FORT WORTH INTERNATIONAL AIRPORT, Fort Worth, Tex

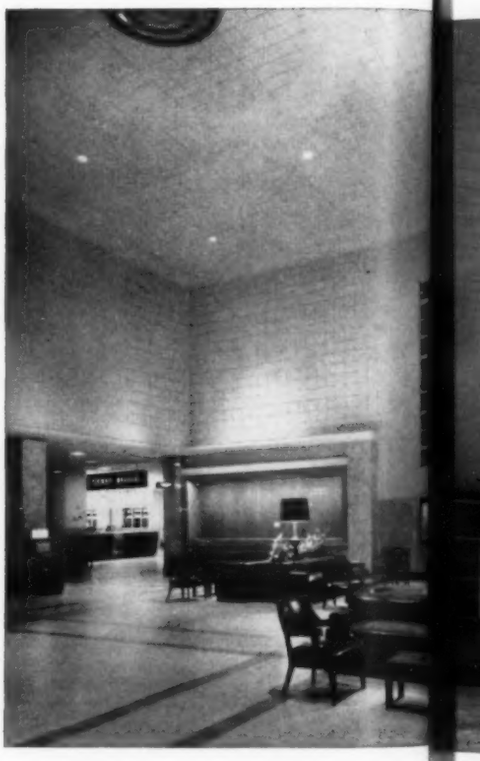
Architect: Joseph R. Pelich

General Contractor: Thomas S. Byrne, Inc

Acoustical Contractor: Chas. F Williams Co.



In addition to providing distinctive beauty, efficient Travertone ceilings permit easy hearing of arrival and departure announcements in the terminal's main lobby.



Proper acoustics were assured for the spacious main lobby of the terminal by installing Travertone not only on the ceiling area but on sections of the walls as well.

At the new Greater Fort Worth International Airport, two distinct sound-conditioning problems prompted the use of two different acoustical materials—Armstrong's Travertone and Cushiontone®.

In the main concourse, lobby, and ticket wings of the terminal building a distinctively beautiful ceiling appearance was as important as acoustical efficiency. Armstrong's Travertone offered both features, as well as complete incombustibility.

Economy was the important factor in sound conditioning the lower floor of the terminal where large work spaces are located. Cushiontone, a perforated wood fiber tile, was selected. The low initial cost and easy maintenance of Cushiontone permit economical treatment of large areas without any sacrifice of acoustical efficiency.

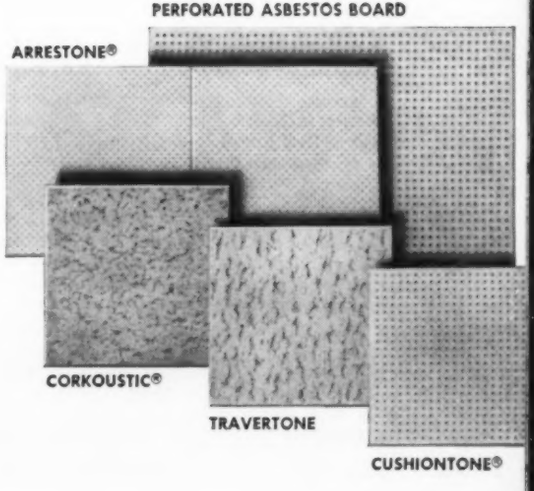
Travertone and Cushiontone are two of Armstrong's complete line of sound-conditioning materials. Call in your Armstrong Acoustical Contractor for helpful advice, with no obligation, on Armstrong's Acoustical Ceilings. With a wide range of special product features to select from, there's one material that best meets the requirements of every job. For the free booklet, "How to Select an Acoustical Material," write directly to Armstrong Cork Company, 4209 Rock Street, Lancaster, Pennsylvania.



Over 200 feet of ticket counters are kept comfortably quiet even at the busiest times by ceilings of noise-absorbing Armstrong's Travertone.



Large work spaces like this baggage area require sound conditioning that is moderate in cost, high in acoustical efficiency, and easy to maintain. Here, economical Armstrong's Cushiontone was used.



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CANADA
(*Continued from page 32*)

sonry, except where the vertical window fins are shown and these are of architectural concrete. Architectural concrete is also used in the spandrels between these projecting fins. Main entrance doors and frames are of anodized aluminum; the floors are asphalt tile over concrete, except in corridors, stairways and washrooms, which are terrazzo. All ceilings are acoustically treated and lighting is by fluorescent unit.

Architects were Dewar, Stevenson & Stanley of Edmonton and Calgary, Alta.



O'Keefe's Retail Store at Dundas and Victoria streets in Toronto was an alteration job to the end of an old bottling plant. An uneven roof line was brought to a uniform level and some ugly windows filled in, says the architect, to give a good background for the large sign. The curve of Dundas Street dictated placing the advertising pylon forward to be visible several blocks to the west. The refrigerated storage space is to the left of the store and company offices to the right. The curved wall of the store (below) is covered with oak half rounds and other walls with cement enamel in company colors. Floor has diagonals in line of traffic flow in the store. Architect: Earle C. Morgan



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Walter Landor & Associates used canvas to outstanding advantage in the design of Joseph Magnin's Resort Fashion Store at Cal-Neva, Lake Tahoe.



JOSEPH MAGNIN'S, Cal-Neva, Lake Tahoe

Designers: Walter Landor & Associates, Industrial Design, San Francisco

FREE: Write today for our brochure on canvas applications. It contains original and practical ideas, plus helpful instructions for specifying canvas.



"We had a real construction problem in designing Joseph Magnin's Cal-Neva Store. The problem? Winter snows sometimes averaging 12 feet in depth,—summer season only two months long.

"Our solution? We conceived the Cal-Neva Store as a "Big Top" demountable canvas tent. Festive looking and cool in the heat of summer, the canvas roof and facade can be stored away in the wintertime. Thus, impressive savings resulted from the elimination of the need for heavy duty construction.

"This concept of the use of canvas afforded other spectacular advantages. Lighted from the inside at night the tent acts as an illuminated signboard visible from far away, creating a gala atmosphere tempting to shoppers in a holiday mood."

Walter Landor

Walter Landor & Associates
Industrial Design

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SCHOOL AID EXTENDED — BUT NO PLUSH ALLOWED

THE SCHOOL CONSTRUCTION PROGRAM, affecting areas "impacted" by new defense installations, got a two-year extension and $70.1 million in supplemental appropriations from the Congress on the closing day of the 83rd's first session.

There was little controversy over extending the program but a good deal of discussion on the question of paying off on back entitlements. Conferees of both House and Senate, while agreeing to a total program of some $174 million for the two-year period, reduced the amount authorized for payment of the entitlements from $95 million to $55 million — with the explanation that most of the reduction represented the difference between "elaborate" school facilities that local districts chose to build under the law (Public Law 815) and the minimum facilities required by the wording of the statute.

The original law was meant only to provide Federal assistance for a portion of the costs of new schools in Federally-"impacted" areas, it was explained. Some communities have wanted much better school plants than such an arrangement could provide — but they will now have to pay for the "extras and accessories" in terms of the difference between the cost of their more elaborate plants and that of the legally-allowable minimum facilities.

Senator Aiken (R-Vt.) reiterated this point in presenting the conference report to the Senate in the final hours of the session: "It was not intended that the Federal government would pay the full cost of complete facilities, but only a percentage of the cost of such facilities as were necessary properly to house and take care of the children, and any extras would be paid for by the community itself."

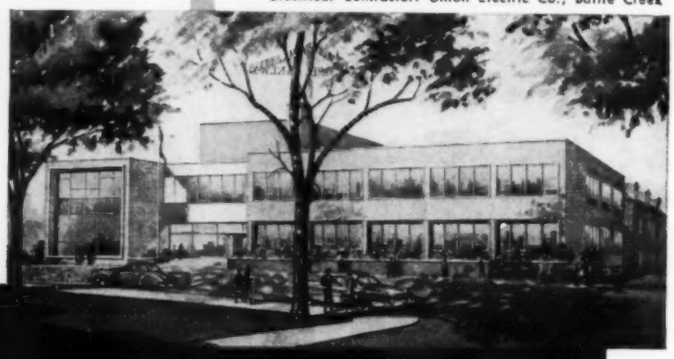
It was estimated that $30 million represented the difference between minimum facilities intended by Congress and the complete facilities actually planned under the program by communities overtaxed by an influx of defense workers.

The "extension" actually revived, a few days later when the bill was signed, the program that had expired June 30, 1953 and gave it new life temporarily — to June 30, 1955.

The $55 million for entitlements was

(*Continued on page 300*)

Architect: Lewis J. Sarvis, Battle Creek
Engineer: Harold C. Hewitt, Dearborn
General Contractor: Phelps-Wagner, Battle Creek
Mechanical Contractor: Hunter-Prell Co., Battle Creek
Electrical Contractor: Union Electric Co., Battle Creek



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Saint Louis 10, Missouri

Hill-Burton Gets $65 Million

The Congress extended until June 30, 1957 the provisions of the Hill-Burton hospital construction program providing funds to aid states and municipalities in the building of hospitals and related facilities. Although the act was not due to expire until June 1955, Congress was persuaded to act now in view of the long lead time required for planning by participating localities and to "assure continuity of their respective programs." Under terms of the authorization, $150 million could be spent annually; but it has in fact been held to $75 million for the last several years and the 1954 appropriation wound up at $65 million.



▲
The massive Parkway House overlooking Philadelphia's famed Parkway contains Steeltex and concrete floors. The $3.7-million apartment house was designed by Roth and Fleisher. Stanwell Construction Co. was general contractor.

Listed below are other important apartment houses in the Philadelphia area in which Steeltex was used.

- **Duval Manor Apartments**
  Philadelphia, Pennsylvania
- **Latches Lane Apartments**
  Merion, Pennsylvania
- **Pelham Park Apartments**
  Philadelphia, Pennsylvania
- **Wynnewood Apartments**
  Wynnewood, Pennsylvania

Note: In the cross section and closeup the weight of the wet concrete forces the backing away, which permits the galvanized welded wire mesh to assume its proper position in the slab. Steeltex Floor Lath also performs two other functions. It permits work on the floor below while pouring is in progress and retains moisture to assist proper curing.



▲
The $7.5-million Presidential Apartments at City Line Ave. and Presidential Blvd. in West Philadelphia contain Steeltex and concrete floors in all buildings. Mayer I. Blum & Sons, Architects; Turner Construction Co., Contractor.

The attractive School Lane House Apartments in Philadelphia's historic Germantown section cost $2.5 million. All floors are concrete, reinforced with Steeltex. Arthur F. Deam, Architects; Turner Construction Co., Contractors.
▼





CONSTRUCTION COST INDEXES

Labor and Materials

United States average 1926–1929 = 100

Presented by Clyde Shute, manager, Statistical and Research Division, F. W. Dodge Corp., from data compiled by E. H. Boeckh & Assocs., Inc.

NEW YORK

Period	Residential		Apts., Hotels Office Bldgs.	Commercial and Factory Bldgs.	
	Brick	Frame	Brick and Concr.	Brick and Concr.	Brick and Steel
1930	127.0	126.7	124.1	128.0	123.6
1935	93.8	91.3	104.7	108.5	105.5
1939	123.5	122.4	130.7	133.4	130.1
1940	126.3	125.1	132.2	135.1	131.4
1946	181.8	182.4	177.2	179.0	174.8
1947	219.3	222.0	207.6	207.5	203.8
1948	250.1	251.6	239.4	242.2	235.6
1949	243.7	240.8	242.8	246.4	240.0
1950	256.2	254.5	249.5	251.5	248.0
1951	273.2	271.3	263.7	265.2	262.2
1952	278.2	274.8	271.9	274.9	271.8
Apr. 1953	278.9	275.4	274.9	279.0	274.2
May 1953	277.7	274.5	273.5	278.5	272.8
June 1953	279.6	277.6	275.9	279.6	276.4
	% increase over 1939				
June 1953	**126.4**	**126.8**	**111.1**	**109.6**	**112.5**

ATLANTA

Period	Residential		Apts., Hotels Office Bldgs.	Commercial and Factory Bldgs.	
	Brick	Frame	Brick and Concr.	Brick and Concr.	Brick and Steel
1930	82.1	80.9	84.5	86.1	83.6
1935	72.3	67.9	84.0	87.1	85.1
1939	86.3	83.1	95.1	97.4	94.7
1940	91.0	89.0	96.9	98.5	97.5
1946	148.1	149.2	136.8	136.4	135.1
1947	180.4	184.0	158.1	157.1	158.0
1948	199.2	202.5	178.8	178.8	178.8
1949	189.3	189.9	180.6	180.8	177.5
1950	194.3	196.2	185.4	183.7	185.0
1951	212.8	214.6	204.2	202.8	205.0
1952	218.8	221.0	212.8	210.1	214.3
Apr. 1953	221.7	223.3	217.9	218.4	220.0
May 1953	221.7	223.3	217.9	218.4	220.0
June 1953	221.9	223.5	218.2	218.6	220.2
	% increase over 1939				
June 1953	**157.1**	**169.0**	**129.4**	**124.4**	**132.5**

ST. LOUIS

1930	108.9	108.3	112.4	115.3	111.3
1935	95.1	90.1	104.1	108.3	105.4
1939	110.2	107.0	118.7	119.8	119.0
1940	112.6	110.1	119.3	120.3	119.4
1946	167.1	167.4	159.1	161.1	158.1
1947	202.4	203.8	183.9	184.2	184.0
1948	227.9	231.2	207.7	210.0	208.1
1949	221.4	220.7	212.8	215.7	213.6
1950	232.8	230.7	221.9	225.3	222.8
1951	252.0	248.3	238.5	240.9	239.0
1952	259.1	253.2	249.7	255.0	249.6
Apr. 1953	261.1	254.0	255.2	263.5	254.6
May 1953	262.3	254.2	258.1	268.0	258.1
June 1953	262.4	254.3	258.9	268.4	261.6
	% increase over 1939				
June 1953	**138.1**	**137.7**	**118.1**	**124.0**	**119.8**

SAN FRANCISCO

1930	90.8	86.8	100.4	104.9	100.4
1935	89.5	84.5	96.4	103.7	99.7
1939	105.6	99.3	117.4	121.9	116.5
1940	106.4	101.2	116.3	120.1	115.5
1946	159.7	157.5	157.9	159.3	160.0
1947	193.1	191.6	183.7	186.8	186.9
1948	218.9	216.6	208.3	214.7	211.1
1949	213.0	207.1	214.0	219.8	216.1
1950	227.0	223.1	222.4	224.5	222.6
1951	245.2	240.4	239.6	243.1	243.1
1952	250.2	245.0	245.6	248.7	249.6
Apr. 1953	252.8	247.1	251.4	255.4	254.8
May 1953	252.3	246.4	251.4	255.6	254.3
June 1953	253.7	248.5	252.7	256.0	255.0
	% increase over 1939				
June 1953	**140.2**	**150.3**	**115.2**	**110.0**	**118.9**

The index numbers shown are for combined material and labor costs. The indexes for each separate type of construction relate to the United States average for 1926–29 for that particular type — considered 100.

Cost comparisons, as percentage differences for any particular type of construction, are possible between localities, or periods of time within the same city, by dividing the difference between the two index numbers by one of them; i.e.:

index for city A = 110
index for city B = 95

(both indexes must be for the same type of construction).

Then: costs in A are approximately 16 per cent higher than in B.

$$\frac{110-95}{95} = 0.158$$

Conversely: costs in B are approximately 14 per cent lower than in A.

$$\frac{110-95}{110} = 0.136$$

Cost comparisons cannot be made between different types of construction because the index numbers for each type relate to a different U. S. average for 1926–29.

Material prices and wage rates used in the current indexes make no allowance for payments in excess of published list prices, thus indexes reflect minimum costs and not necessarily actual costs.

These index numbers will appear regularly on this page.

in Experience

Bothel	Washington
Shaker Heights	Ohio
New York	New York
Lisbon Falls	Maine
Trenton	New Jersey
Greenwood	Wisconsin
Canton	Ohio
Lockport	Illinois
Decatur	Michigan
Hartford	Wisconsin
Sidney	Ohio
Spokane	Washington
Mountainside	New Jersey
Elgin	Illinois
Westbrook	Maine
Bellefonte	Pa.
Janesville	Wisconsin
Lockport	Illinois
Ridgeville	Ohio
Willow Run	Michigan
Paramount	California
East Moline	Illinois
Kiel	Wisconsin
South Portland	Maine
Livingston	New Jersey
Richland County	Ohio
East Moline	Illinois
Jefferson Borough	Pa.
Kenosha County	Wisconsin
Republic	Ohio
Lombard	Illinois
Morristown	New Jersey
Waterville	Maine
Bethel Borough	Pa.
Ravenna	Ohio
Oildale	California
Traverse City	Michigan
DeKalb	Illinois
Menlo Park	California
Poland	Ohio
Lake Geneva	Wisconsin
Lodi	New Jersey
Carrick	Pa.
Plain Township	Ohio
Decatur	Illinois
Sturgis	Michigan
Laona	Wisconsin
Perry	Ohio
Spokane	Washington
King City	California
Roslyn Long Island	New York
Pepper Pike	Ohio
St. Ignace	Michigan
Decatur	Illinois
Herlong	California
Parma	Ohio
Spokane	Washington
South Lyon	Michigan
Decatur	Illinois
Lowell	Wisconsin
Livingston	New Jersey
Castle Shannon	Pa.
Painesville	Ohio
Crystal Lake	Illinois
Saginaw City	Michigan
Gilroy	California
Lyons	Wisconsin
Painesville	Ohio
Crossville	Illinois
Saginaw	Michigan
Litchfield	Ohio
Madison	Wisconsin
Saginaw	Michigan
Oak Hill	Ohio
Hawley	Minnesota
Seattle	Washington
Colfax	Illinois
Norwood	Ohio
Fontana	California
Madison	Wisconsin
Castle Shannon	Pa.
Hopkins	Minnesota
North Creek	New York
Northridge	Ohio
Manitowoc	Wisconsin
Shiloh	Pa.
Seattle	Washington
Fellow	California
Saginaw	Michigan
North College Hill	Ohio
Cicero	Illinois
Milton	Wisconsin
Downey	California
Saginaw	Michigan
Shepherdstown	Pa.
Carlisle	Ohio
Milwaukee	Wisconsin
Chicago	Illinois
Jackson	Minnesota
Richland	Washington
Renton	Washington
Champaign	Illinois
Royal Oak	Michigan
Catawsa	Ohio
Reardon	Washington
Ontario	New York
Morrow	Ohio
Ossineke	Michigan
Port Leyden	New York
Swanton	Ohio
Frederick	Maryland
Algonquin	Illinois
Montgomery	Ohio
Littleton	Massachusetts
Whiteland	Indiana
Onsted	Michigan
Toledo	Ohio
Athens	Michigan
Hagerstown	Indiana
Baltimore	Maryland
Two Rivers	Wisconsin
Staten Island	New York
Washington	D. C.
St. Paul	Oregon
Tipton	Iowa
Grand Rapids	Michigan
Darke City	Ohio
Moline	Illinois
Red Wing	Minnesota
Gary	Indiana
Chester Pike	Pa.
Washington	D. C.
Waldport	Oregon
Grand Rapids	Michigan
Georgetown	Indiana
Pengilly	Minnesota
Washington	D. C.
Dayton	Ohio
Morris	Illinois
Spencerport	New York
Walworth	Wisconsin
North Mankato	Minnesota
Dover	Pa.
Waltham	Massachusetts
Yachats	Oregon
Mead	Washington
Rock Island	Illinois
Jeromesville	Ohio
Washington	D. C.
Tulsa	Oklahoma
Grand Rapids	Michigan
Leavenworth	Washington
Morrison	Illinois
Dayton	Ohio
Washington	D. C.
So. Onondaga	New York
Delton	Michigan
Waterford	Wisconsin
Shelby	Ohio
Worthington	Minnesota
Pittsburgh	Pa.
Boyleston	Illinois
Haverhill	Massachusetts
Orchard Park	New York
South Euclid	Ohio
Great Mills	Maryland
O'Hara Township	Pa.
Richville	Michigan
Bensonville	Illinois
Pasco	Washington
New Boston	Ohio
Oakmont	Pa.
Redford	Michigan
Bellwood	Illinois
Springfield	Ohio
Akron	Michigan
Panama	New York
Newark	Ohio
Port Huron	Michigan
Wolf Lake	Illinois
Montgomery City	Pa.
Neosho	Wisconsin
Springfield	Ohio
Pontiac	Michigan
Batavia	Illinois
Mt. Healthy	Ohio
Hingham	Massachusetts
Monroeville	Pa.
Albion	Michigan
South Euclid	Ohio
West Chester	Illinois
Pontiac	Michigan
Glenmont	Maryland
Bartelso	Illinois
Newport	Washington
Albion	Michigan
Waverly	Illinois
Stark County	Ohio
Holliston	Massachusetts
Penfield	New York
Pontiac	Michigan
Stark City	Ohio
Pinconning	Michigan
Avon	Illinois
Lawrence	Massachusetts
Mt. Carmel	Ohio
Wauconda	Illinois
Stow	Ohio
Aurora	Illinois
Oxford	Michigan
Warrenville	Illinois
Winona	Minnesota
North Dartmouth	Massachusetts
Shelby County	Illinois
Lorain	Ohio
Burlington	Vermont
Arlington	Texas
Rochester	New Hampshire
East Norwalk	Connecticut
Cleveland	Ohio
Melrose Park	Illinois
Camden	Tennessee
Peabody	Massachusetts
Homer	Michigan
Brunswick	Maryland
Sheffield	Illinois
Lorain	Ohio
Littleton	New Hampshire
Schofield	Wisconsin
Knoxville	Tennessee
Newton	Iowa
Climax	Colorado
Indianapolis	Indiana
Pittsfield	Massachusetts
Lorain City	Ohio
Bladensburg	Maryland
Memphis	Tennessee
Mendota	Illinois
Flint	Michigan
Hillsboro	New Hampshire
Lisbon	Ohio
Serena	Illinois
Shawano	Wisconsin
Rye	New York
Bethesda	Maryland
Hobart	Indiana
Colorado Springs	Colorado
Lexington	Ohio
Midlothian	Illinois
Nashville	Tennessee
Quincy	Massachusetts
Concord	New Hampshire
Cleveland	Ohio
Harrison	Michigan
Nashville	Tennessee
Taconite	Minnesota
Siren	Wisconsin
Grand Forks	North Dakota
Revere	Massachusetts
Columbus	Ohio
Bethesda	Maryland
Hobart	Indiana
Scanlon	Minnesota
Laurel	Ohio
Medical Lake	Washington
Osage	Iowa
Wayland	New York
Berwyn	Maryland
Sparta	Wisconsin
Sevierville	Tennessee
Arlington	Oregon
Grand Forks	North Dakota
Lake County	Ohio
St. Paul	Minnesota
Midlothian	Illinois
St. Paul	Minnesota
Beaverton	Oregon
Rawlins	Wyoming
Fargo	North Dakota
Seneca	Illinois
Concord	Ohio
Ottumwa	Iowa
Denver	Colorado
Highland	Indiana
Grosse Pointe Farms	Michigan
Wheeling	West Virginia
Laramie	Wyoming
Corvallis	Oregon
Milledgeville	Illinois
St. Paul	Minnesota
Red Oak	Iowa
Colorado Springs	Colorado
Grandville	Michigan
Warren City	New York
Rock Island	Illinois
Kingsville Township	Ohio
St. Louis Park	Minnesota
Charleston	West Virginia
Roy	Oregon
Seekonk	Massachusetts
Minooka	Illinois
Coventry	Ohio
Washington	D. C.
Syracuse	New York
Springfield	Minnesota
Charleroi	Pa.
Spencer	Iowa
Denver	Colorado
Sharon	Massachusetts
Moline	Illinois
Johnstown	Ohio
Washington	D. C.
Springfield	Oregon
Denver	Colorado
Hammond	Indiana
Swampscott	Massachusetts
Cuyahoga County	Ohio
Rochester	Minnesota
Sumner	Iowa
Tess Corners	Wisconsin
Swansea	Massachusetts
Colorado Springs	Colorado
Oconomowoc	Wisconsin
Nimisila	Ohio
Denmark High School	
Red Bud Community High School	
Glasgow Grade School	
Groveland School	
Shirley Hills Elementary School	
Huron Junior High School	
Glasgow High School	
St. George's Parish School	
Booker T. Washington School	
Loveland High School	
Freeland School	
East Side Grade School	
Mainsville Elementary School	
South Side Elementary School	
Komarak School	
Deer Park School	
West Side Grade School	
Alameda Junior High School	
C. M. Russell School	
McKinley School	
Onarga High School Addition	
Armistead Gardens School	
Gettysburg High School	
East Elementary School	
Franklin School Addition	
Elementary School Building	
St. Francis of Assisi School	
Accokeek Elementary School	
Eugene Field School	
Sharp Elementary School	
South Elementary School	
College High School	
Hawthorne School Addition	
Maine Township High School	
Corthell School	
Junior High School	
Dayton Elementary School	
St. Kevin's School	
Fern Wilson School	
Eaton Elementary School	
Jefferson School Addition	
Central High School	
Kearsley Agricultural School	
Elementary School	
Hines School Addition	
St. John Lutheran School	
High School Addition	
Flat Rock High School	
Resinger School	
Loucks School Addition	
Eaton High School	
MacArthur Elementary	
St. Helena School	
Colfax Elementary School	
Washington Carver School	
Polo Grade School	
Nannie Lee Frayser Addition	
Euclid Elementary School	
St. Patrick's School	
Grade School	
Grade School	
New High School	
Grade School Addition	
Elementary School	
Frankfort Village School	
Logan School	
Chewelah High School	
Homestead School	
Prophetstown Grade School	
Marshall Grade School	
Elementary School	
St. Patrick's School	
St. Mary's Academy	
Hickory Grove School	
Elementary School	
Eau Clair School	
Robert E. Lee School	
Junior High School	
McDaniel Elementary School	
Holy Maternity Parish School	
Hyndman Londonderry School	
Upson School	
St. Mary's School	
Rantoul Elementary School	
St. Robert Sellarmine	
Parochial Grade School	
St. Theresa School	
St. Suzanne School	
Iona School	
Carson Elementary School	
St. Thomas Seminary	
Administration Bldg. Addition	
Liberty Drive Elementary	
Mountain Home Grade School	
New Elementary School No. 18	
Horace Mann School	
Weaver School	
Medical Building Addition	
Elementary School	
Grandview School	
Holy Trinity High School	
Harborcreek High School	
Shawnee Elementary School	
Lincoln Park School	
Jefferson School	
Austin High School	
North Side Grade School	
South West LaGrange Elem. School	
Adelaide Davis School	
Manheim School 83	
School Addition	
Coe College Chapel	

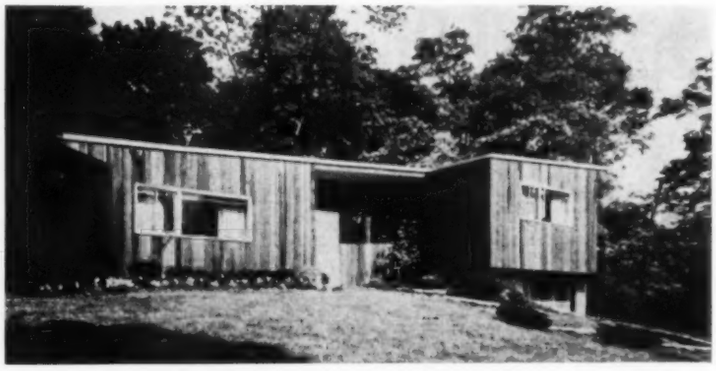
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Bunker Hill	Illinois
Romulus	Michigan
Waukesha	

REQUIRED READING

HOW TO EVALUATE A HOUSE

Before You Buy A House. By John Hancock Callender. Crown Publishers, Inc. (419 Fourth Ave., New York 16, N. Y.) 1953. 8¼ by 11¼ in., 160 pp., illus. $2.95



One of three models in Dillon Woods, Cincinnati, Ohio. John R. Schott, architect; Robert A. Deshon, associate; Dillon's Inc., builder. Illustration from "Before You Buy A House"

Here is a book by a leading architect designed to help the prospective home owner evaluate a house.

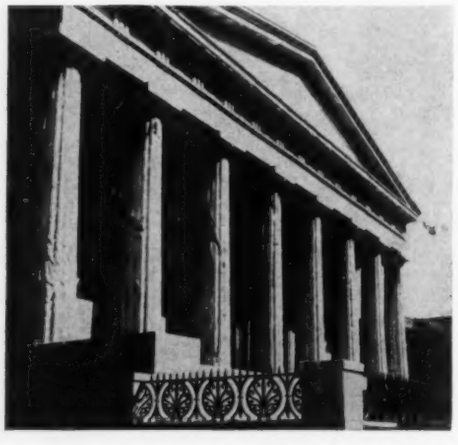
Often the question — to buy or to build — is settled by the time and expense prohibitions of custom building, only to be replaced by an entirely new set of problems as the inexperienced buyer wonders how he can competently judge, value and decide upon a house. The Housing Research Foundation of Southwest Research Institute, for several years concerned with the problems of the home-buyer, joined with the Architectural League of New York to produce this guide for the prospective buyer by John Hancock Callender, A.I.A., Architectural Consultant, Southwest Research Institute, which not only advises on points to be checked in choosing a house, but presents with valuable criticism a group of well designed builders' houses from all over the country.

Though the purchase of a house of proved worth is not without advantages — a fact Callender recognizes and discusses — the problems of buying a new house in a builder's development are those with which he is primarily concerned. Each of the 34 selected development houses is architect designed; none, as the author points out, is typical of the average builder's house of today. Yet all have actually been built and, illustrated by 211 photographs, drawings and plans, serve as good examples of advanced design. Accompanying comments not only point out striking features of each plan, but straight-forwardly call attention to any minor defects.

The book consists of ten chapters which explain to the reader — who presumably knows nothing of joists and Btu's — how to judge a house accurately on the basis of things he can see and understand, and a supplement devoted to the 34 houses with photographs, drawings and comments. The first five chapters which cover such topics as "Budgeting," "Buying a Neighborhood" and "Beginning the Search," carefully weigh major considerations, as well as attaching deserved importance to lesser points that might otherwise be either overlooked or given undue emphasis. In the following chapters the house itself, its outside and then interior living areas, are thoroughly discussed. Everything from style to heating and cooling systems is taken up in terms a layman will have no difficulty in understanding. The valuable "Evaluation Checklist" of Chapter IX, developed by the Housing Research Foundation of Southwest Research Institute, is based on principles discussed in the book; it, again, deals only with items the reader can see and understand. A bibliography divides the ten textual chapters from the 34 houses.

"Before You Buy A House" should be an asset to any prospective buyer, certainly one worth its modest price of $2.95. It should also be a valuable step in raising the standards of the home-building industry as the public learns to look among builders' houses for those designed by architects.

PHILADELPHIA OF THE LAST CENTURY



The Second Bank of the United States by William Strickland, 1818. From "Philadelphia Architecture in the Nineteenth Century"

Philadelphia Architecture in the Nineteenth Century. Theo B. White, Editor. Published for the Philadelphia Art Alliance by the University of Pennsylvania Press. (Philadelphia, Pa.) 1953. 9¼ by 12¼ in. 36 pp. text, 105 plates. $3.50

This catalog of the best examples of the Philadelphia Art Alliance's recent exhibit of that city's 19th century architecture, in its research in a comparatively untouched field, is a significant addition to the literary history of American architecture.

In Philadelphia, perhaps more than in any other of the country's large cities, architecture was free to reflect normal social and cultural change. Strickland and Latrobe, Notman and Haviland are names of the earlier years, when, replaced by its Southern neighbor as the social and political capital of the nation, and outstripped commercially by its rival New York, the city settled down at the beginning of the century to its own resources, strong in tradition and unhurried by pressures of disaster or sudden expansion.

In tracing this quiet development over the century, the book begins with the dominant style of these early years — Greek Revival. Some of these buildings are gone; many still stand — a few renovated and partially restored. Ben-

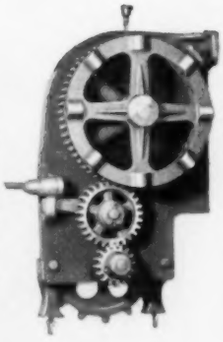
(Continued on page 48)

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Mahon Release Device and Governor on the Automatic Closing Mechanism of a Mahon Underwriters' Labeled Rolling Steel Fire Door. In case of fire, Fusible Links release the closing mechanism and the door closes automatically.



Mahon Release Device on the Chain-Gear Operator of a Mahon Mechanically Operated, Underwriters' Labeled, Automatic Rolling Steel Fire Door. Fusing of the Fusible Link, which releases the Automatic Closing Mechanism, simultaneously disengages the Chain-Gear Operator.

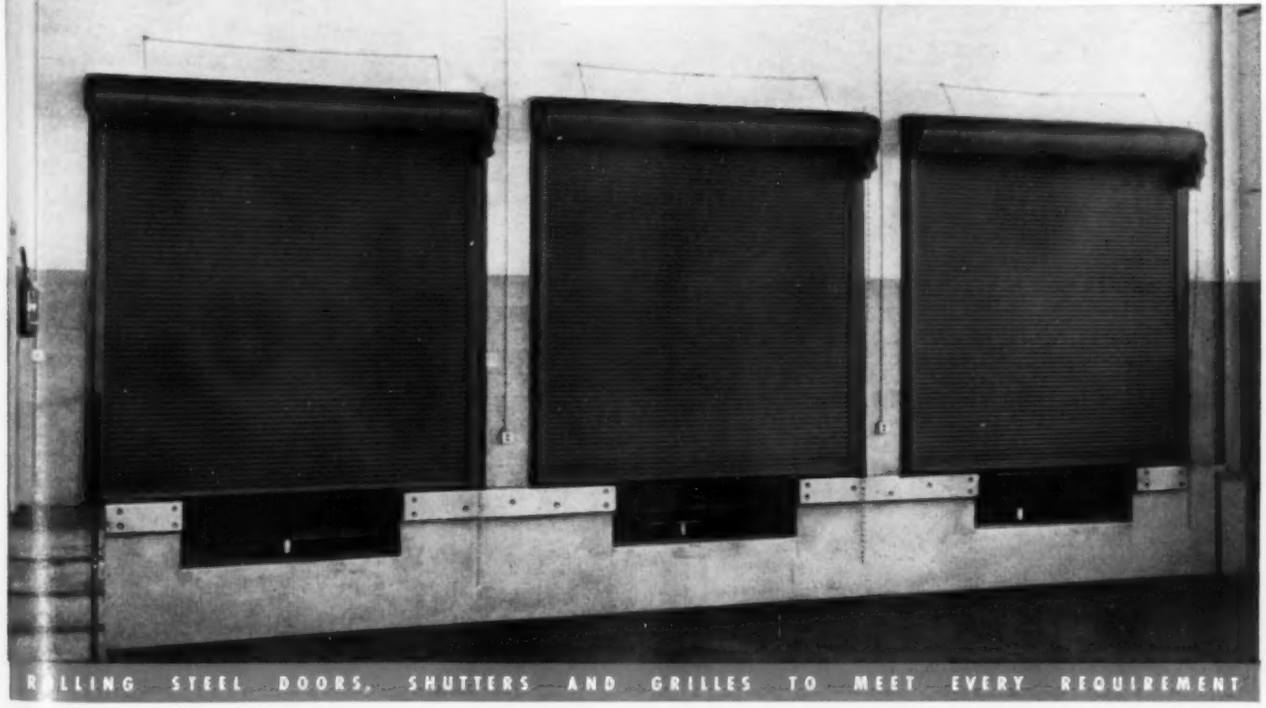
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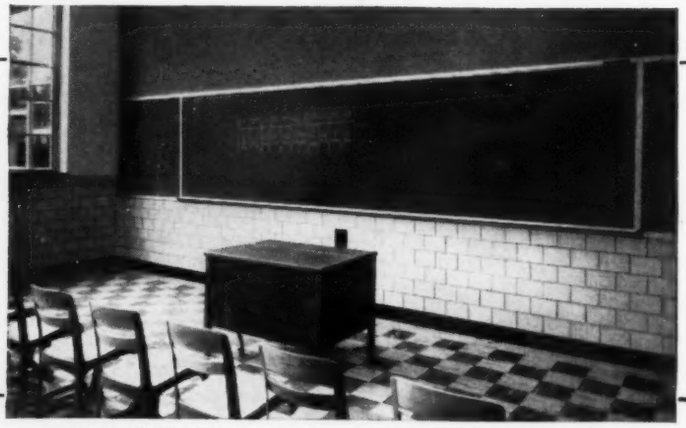


ROLLING STEEL DOORS, SHUTTERS AND GRILLES TO MEET EVERY REQUIREMENT

Three Mahon Underwriters' Labeled, Automatic Rolling Steel Fire Doors installed on openings to an enclosed truck loading dock in a new plant for Towne-Robinson Nut Co., Detroit, Mich. Austin Engineers, Inc., Designers. The Austin Company, Cleveland, Ohio, Gen. Contrs.

MAHON

12 REASONS WHY ARCHITECTS SPECIFY
magnetic Armorply Chalkboard



BERGEN COUNTY VOCATIONAL SCHOOL—ARCHITECT: LAWRENCE C. LICHT, ENGLEWOOD, N. J.

The days of the old "blackboard" are numbered. And here are plenty of good reasons why the attractive green porcelain-on-steel *armorply chalkboard* is taking its place in schools, offices, hospitals, and terminal buildings . . . for visual aid work, personnel training, production control, scheduling, and so forth.

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8. TAKES CHALK BEAUTIFULLY. Specially developed finish is easy to write on and erase. Can't choke with chalk. No squealing or screeching!

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10. UNIFORM QUALITY. Strict quality control keeps all boards uniform in color and finish from face to base . . . slate boards are almost impossible to match.

11. CUTS DOWN NUMBER OF SEAMS. Extra-long Armorply Chalkboards up to 10 feet lengths, eliminate most seams. Blackboards available in short lengths only.

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REQUIRED READING

(*Continued from page 46*)



State House Steeple rebuilt by William Strickland, 1828, is early example of accurate reconstruction. From "Nineteenth Century Architecture in Philadelphia"

jamin Henry Latrobe's Bank of Pennsylvania, which bridged the two centuries, has long been demolished, and Strickland's Second Bank of the United States (later used as the Philadelphia Custom House) an adaptation of the Parthenon of Athens, was partially restored in 1941. Latrobe's Pumping Station that once stood in Center Square is an example of a combination of functional form and classic trimmings. Strickland's Naval Hospital and Merchants' Exchange are also included in the exhibit. Even more influential, perhaps, in the city's Greek Revival was John Haviland whose Deaf and Dumb Asylum stands today as the Philadelphia School of Industrial Art.

Philadelphia's receptiveness to the new architectural ideas of the early 1800's is attested by its acceptance of varied style. Notable is the Gothic such as Strickland's Masonic Hall of 1808–11 and his St. Stephen's Church of 1823. Interesting in his Gothic-style Eastern State Penitentiary of 1821, marking the beginning of an epoch in penal architecture embodying concepts of modern penology, which won recognition both here and abroad. Strickland's rebuilding of Independence Hall Tower in 1828, an indication of the growing feeling for historical style, was a forerunner of later restoration. Further innovation, less popular, in the city's variety of style, is found in such experiments as Walter's

(*Continued on page 376*)



Richard Shirk

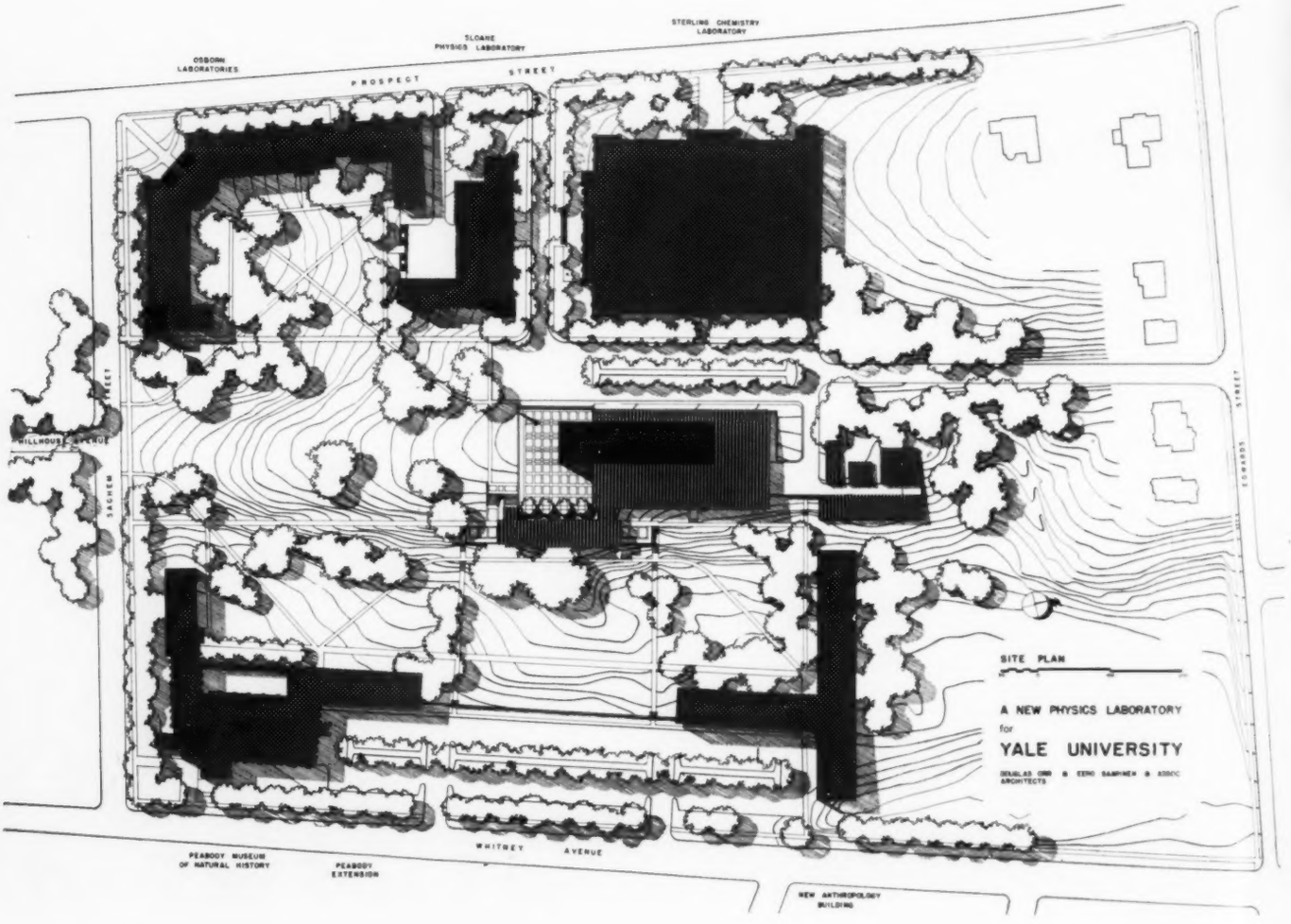
PROPOSED PHYSICS BUILDING FOR YALE UNIVERSITY

Douglas Orr and Eero Saarinen & Associates, Architects

PHYSICS BUILDING FOR YALE

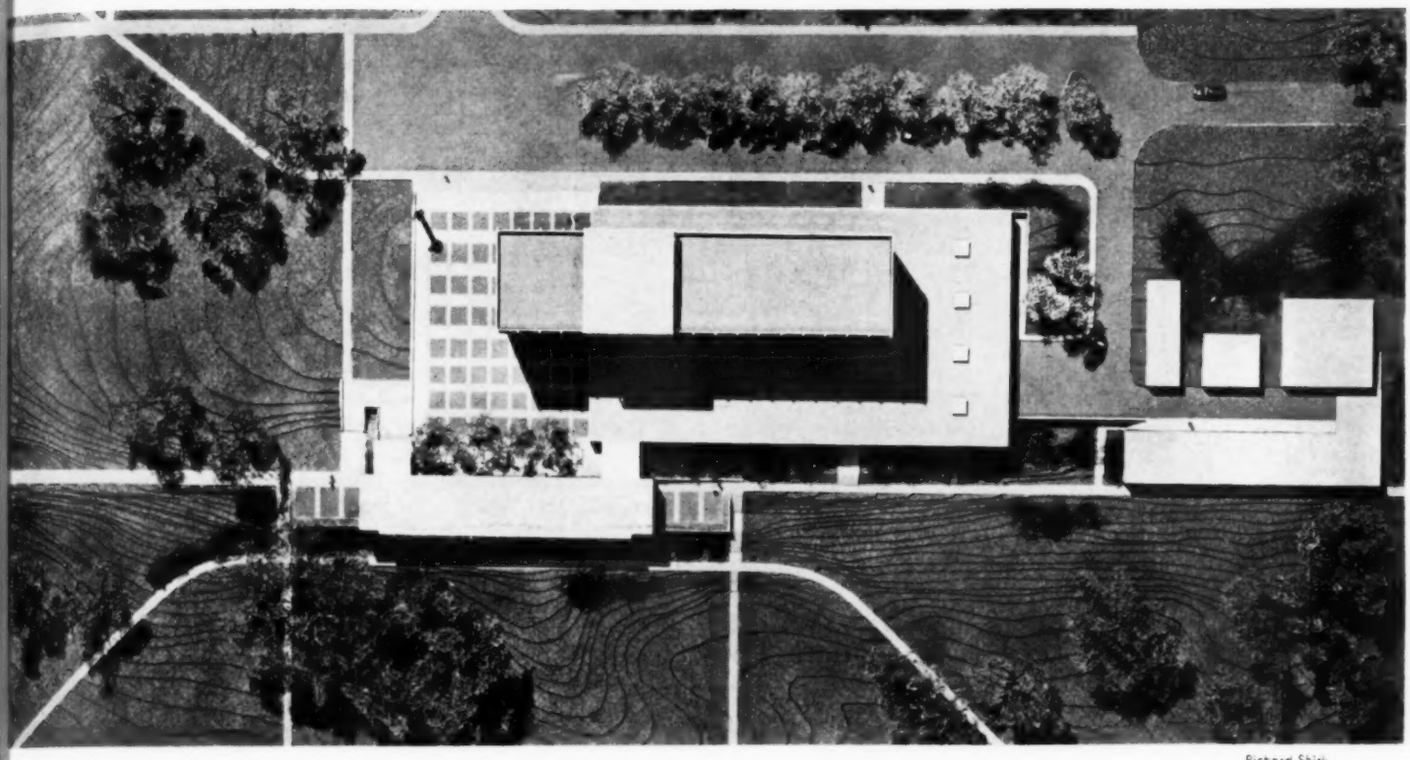
THE ARCHITECTS for the proposed Physics Building for Yale, still only in project status, took two major considerations for their guides. One was preservation of handsome vistas from a hilly site, the other was to fit a contemporary concrete structure into its Gothic surroundings.

Says Eero Saarinen: "The shape of the hill, the vistas from surrounding streets, particularly that from the main campus along Hillhouse Avenue (an old and very handsome street starting at the left of the site plan), made us decide that the building's major axis should run north and south. Since the view from the hill back towards the University is equally fine, the small piazza was so placed that this prospect would be open to students passing to and from classes."



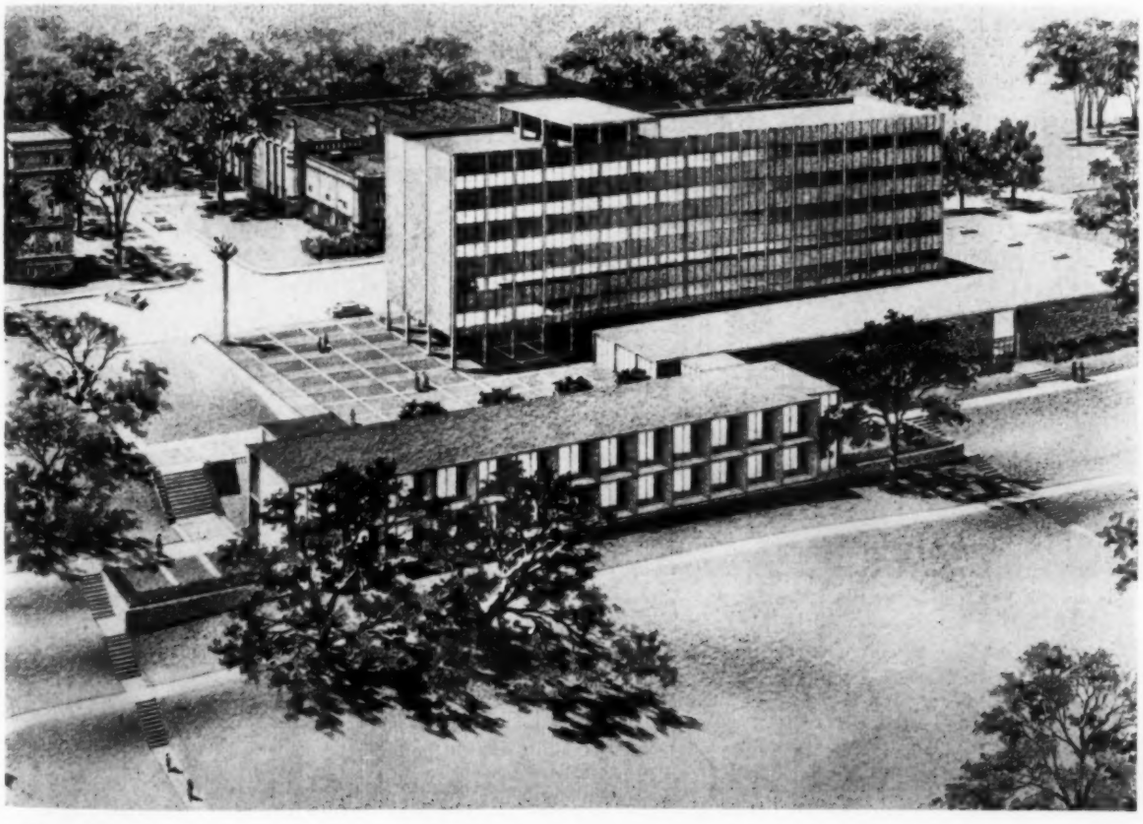
The Physics Building, in the opinion of the architects, is one where physical requirements and economics appear to justify a vertical building. Laboratories, auditoriums and specialized rooms requiring utilities are grouped together around vertical utility stacks in the main block, while classrooms have been moved out to form a low wing to the southeast. The lobby relates these elements directly to the piazza, and the service area at the north end allows access to both the main building and the experimental physics group beyond.

The effort to avoid clashing with its Gothic environment was



Richard Shirk

handled with subtlety, involving a certain emphasis on verticals and the use of Weymouth granite masonry, a stone appearing in many of the existing buildings. Framing is of reinforced concrete, the vertical block taking a 12-ft module, the low mass a unit of 24 ft. Skin treatment of the vertical block will be 4-ft modules of heat-resistant glass in fixed and operating sash, and 2-in. baked enamel metal panels, the whole framed in painted hollow metal in an overall vertical pattern.





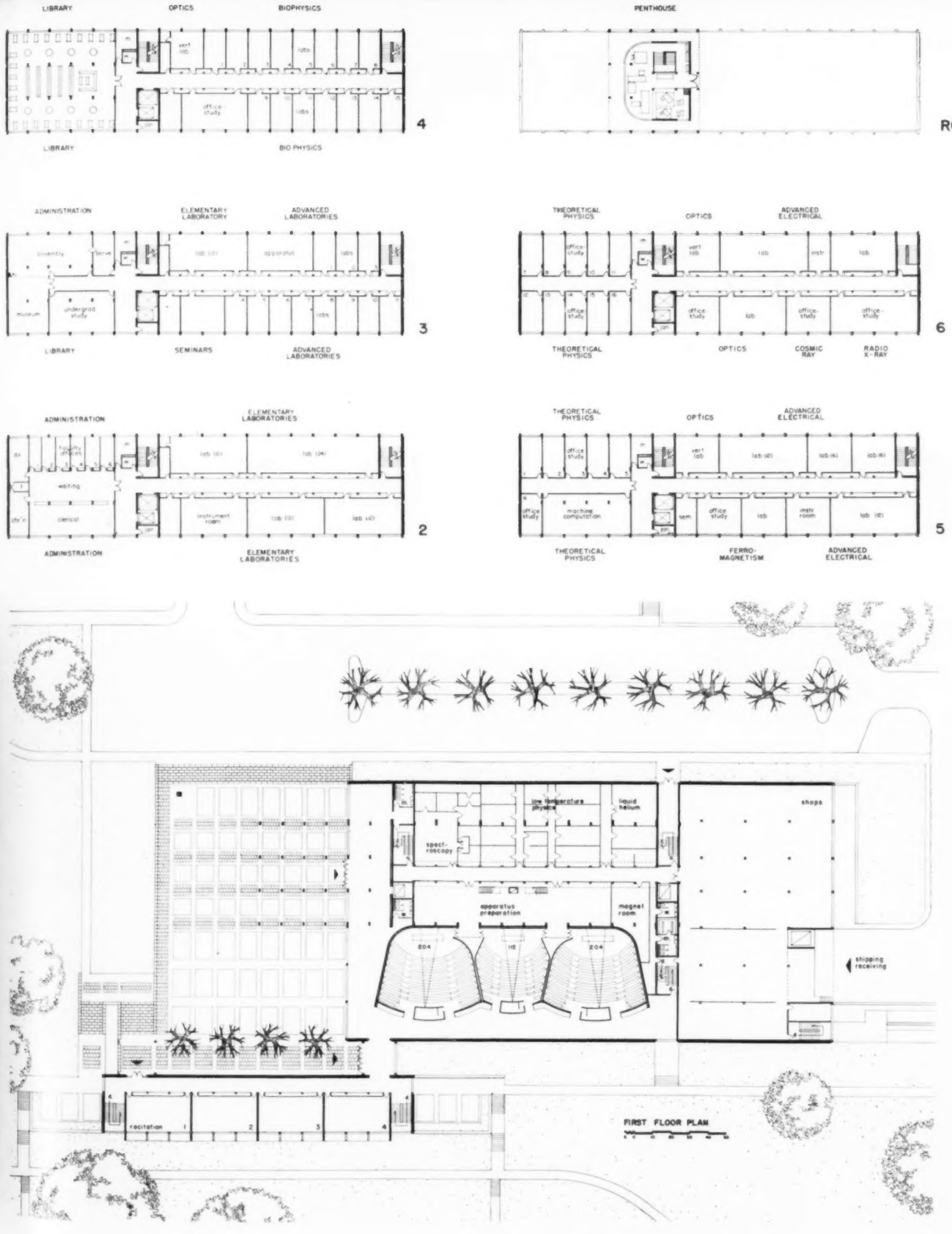
An earlier scheme (left) showed a vertical block and a round drum containing the lecture halls. The vertical block had a system of sunshades consisting of secondary glass walls about three and a half feet out from the regular wall, with the intent of reducing sun heat and, it was hoped, eliminating the cost of air conditioning. The architects had Charles Leopold, mechanical engineer, test this approach. His study showed that the outside walls could not be justified, and they were abandoned. It indicated that the sun accounted for only about 35 per cent of the heat load, the rest coming from sky radiation and electric lights. Also the scheme seemed to appear a bit cold, and the drum tended to get too large

PHYSICS BUILDING FOR YALE

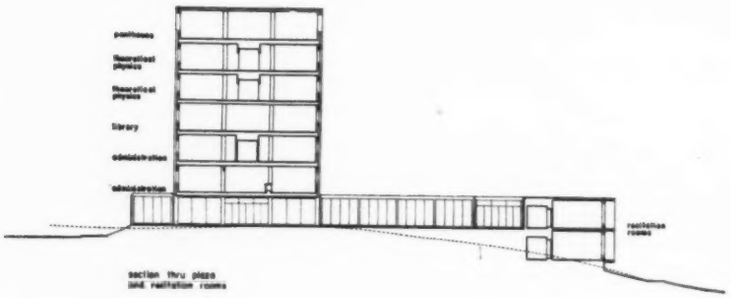


Richard Shirk

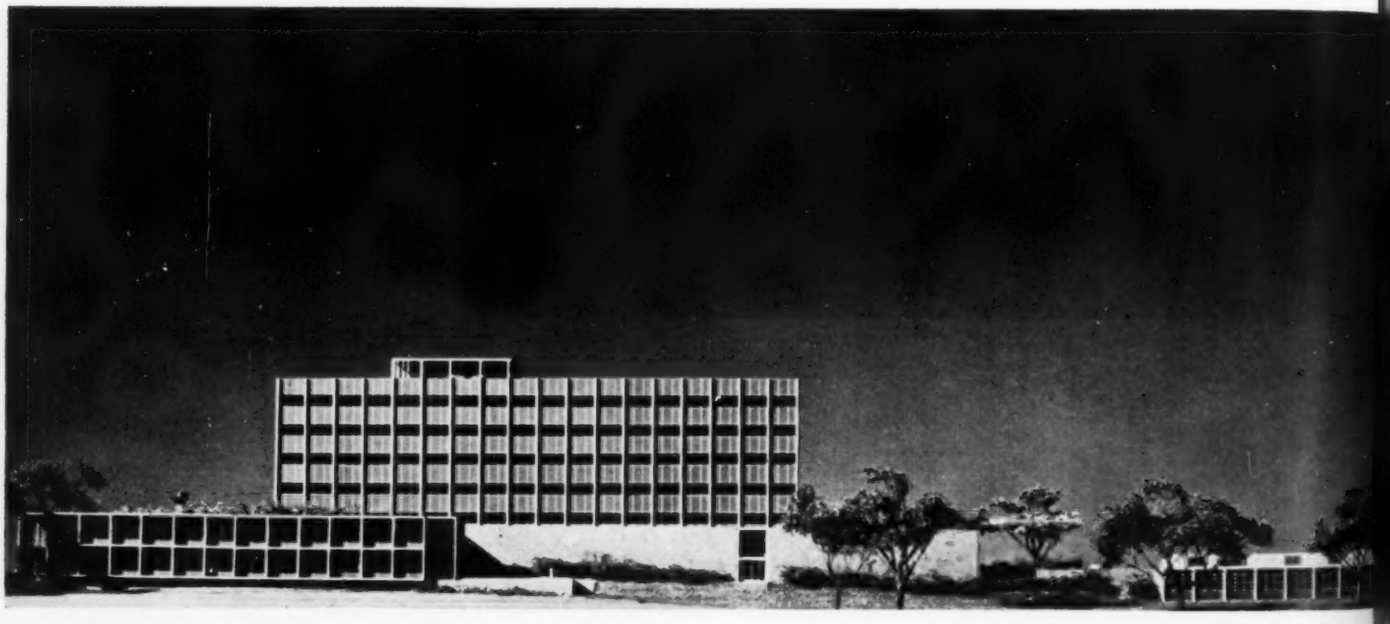
Masonry is to be Weymouth granite, a stone much used in surrounding buildings. Piazza will be paved in granite, blacktop and concrete. Sides of building will be enamel panels, heat-resistant glass



Because the building is still a project, certain discrepancies exist between upper and main floor plans. The main floor scheme, however, represents the current thinking and upper floors will conform

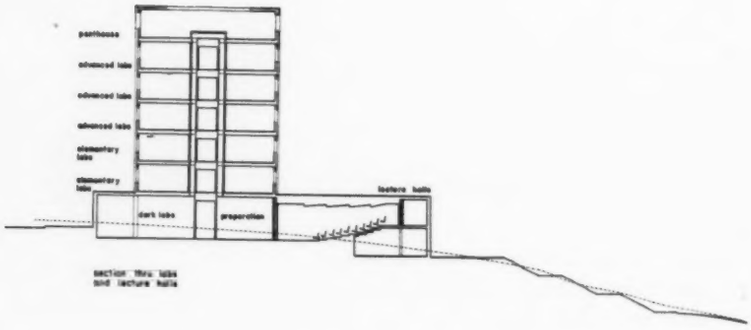


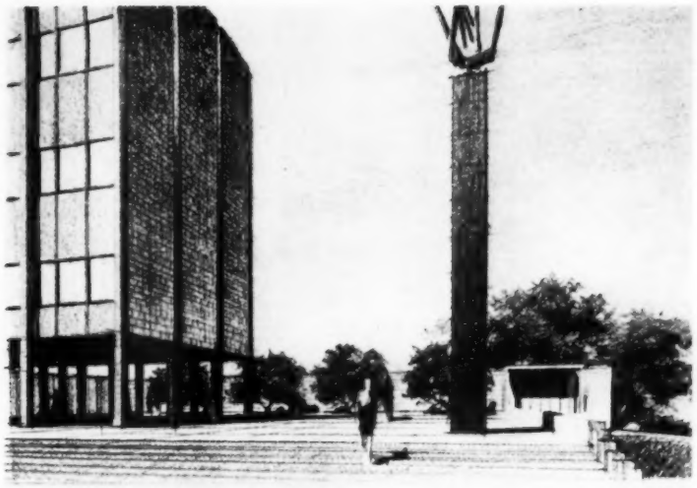
Present proposal is to stack up laboratories and offices vertically around a core for utility lines



Richard Shirk

Lecture halls are together in a low wing following slope; classrooms are similarly placed

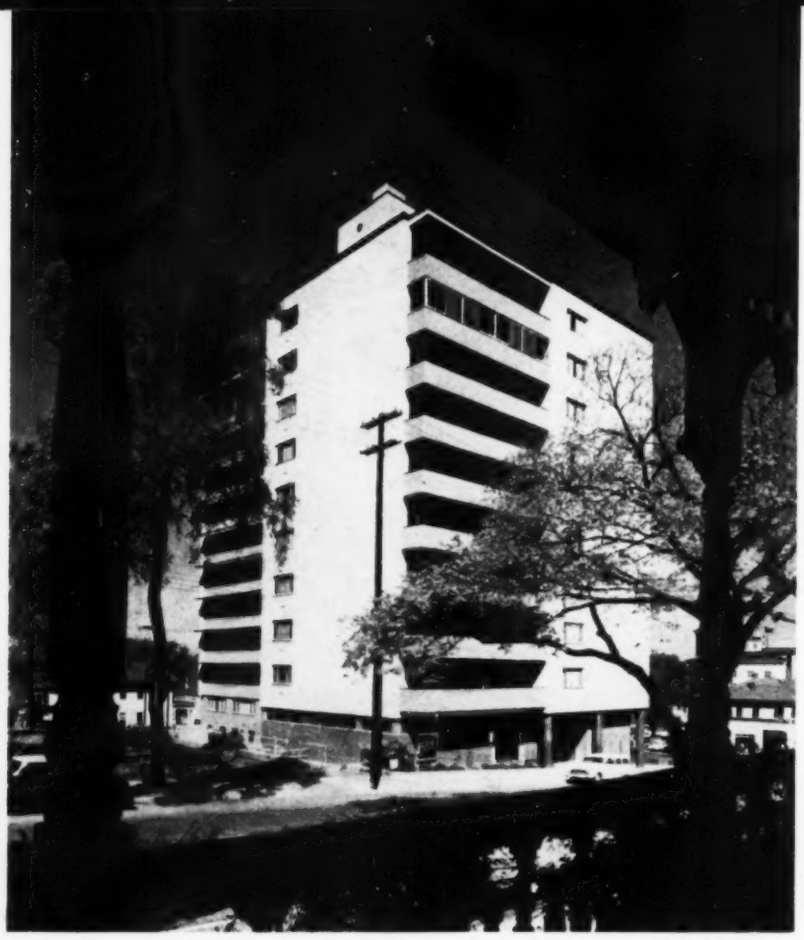




Piazza is planned as a pleasant gathering place for students, focused toward nice views

Ezra Stoller





Joseph W. Molitor



MINIMUM-HOUSEKEEPING A

Most apartments face north or south (below and left); those on east have balconies. Only windows on west are in stair well



Sherlock, Smith & Adams, Architects & Engineers



APARTMENTS ON DOWNTOWN SITE

Walter Bragg Smith Apartments, Montgomery, Alabama

THIS TWELVE-STORY APARTMENT HOUSE, only two blocks from downtown Montgomery, was planned primarily for business men and women. Of its 122 apartments, 103 are single-room minimum-housekeeping "studios" and 19 are one-bedroom suites.

In plan the building is L-shaped to overcome the difficulties of a limited and sharply sloping site, facilitate on-site parking, and provide the maximum number of apartments on the north side facing a panoramic view of the city. While the steepness of the site necessitated extensive excavation and a high retaining wall to make the space between the south wall and the edge of the lot usable as a driveway, it also permitted inclusion of a mezzanine over half the lobby floor.

The building, entirely financed through the FHA, is an outstanding example of what can be done architecturally under the restrictions imposed by the housing law; it won the Honor Award at the Third Annual Gulf States Regional Conference last October. Framing is steel, floors are 2-in. concrete slab. End walls are gray face brick, spandrels are green glazed tile, columns are faced with mosaic tile. Italian marble is used on the exterior of the first floor and in the lobby. The building is fully air conditioned.

Main entrances are on north (above and below) and east (top, opposite); both lead directly to lobby. Parking area is at west





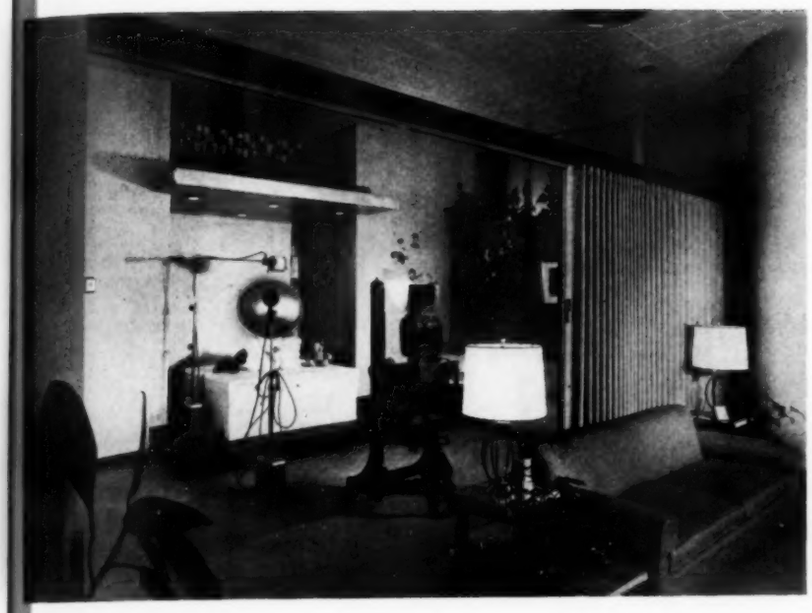


Lobby area is more like that of residential hotel than an apartment house, includes registration and mail desk, lounge, newsstand, and public rest rooms. Mural is air view of entire city; walls around entrance are Italian marble; floors are terrazzo

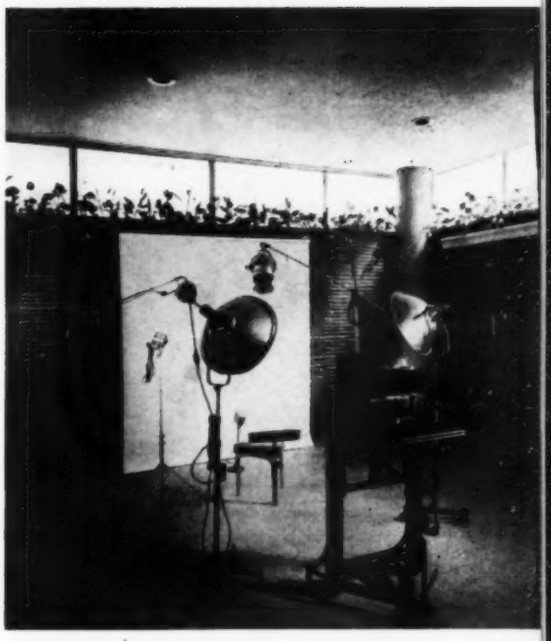


FIRST FLOOR

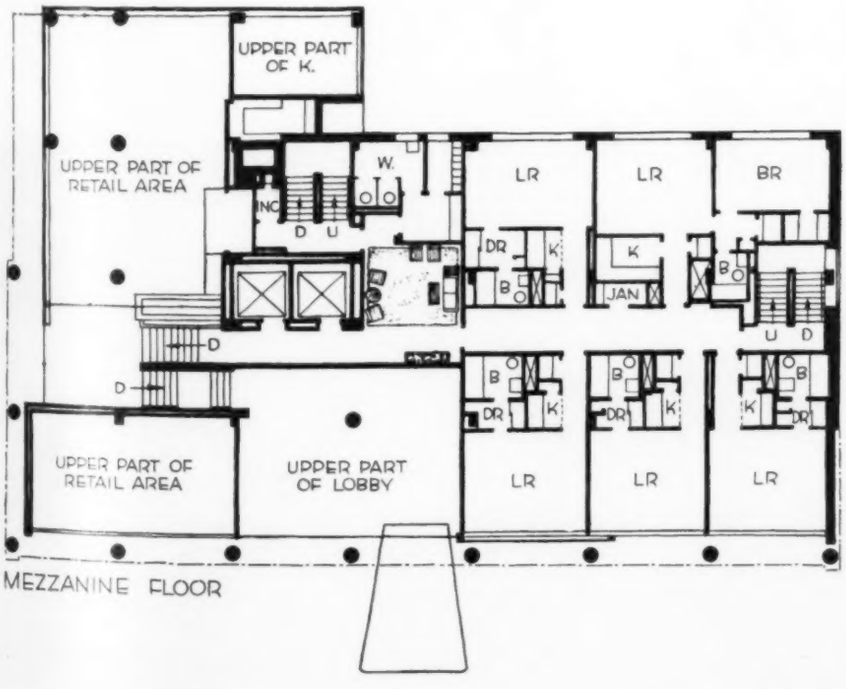
Photographer's studio (left and below), dress shop and drug store are current occupants of ground-floor retail areas. Owner required maximum retail space on lobby floor, got three separate areas each with street frontage, lobby access



Joseph W. Molitor



MINIMUM-HOUSEKEEPING APARTMENTS



MEZZANINE FLOOR

Mezzanine, made possible by sharp slope of site, extends over western half of lobby floor, houses rest room and lounge and four apartments. East entrance to building is on intermediate level, has own small lobby with stairs leading up to mezzanine and down to main north lobby





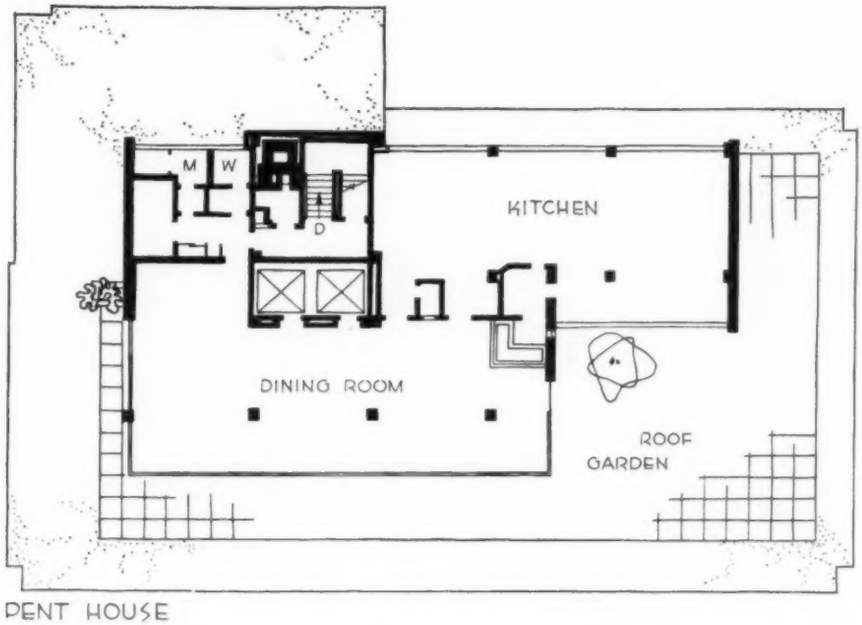
Upper floors have 11 studio and two one-bedroom apartments each, arranged to permit creation of larger suites (bottom of page) with minimum of structural change. Aluminum sun shades (above) protect south windows. Utility elements—baths, kitchens, etc.—are grouped around pipe chases



TYPICAL FLOOR





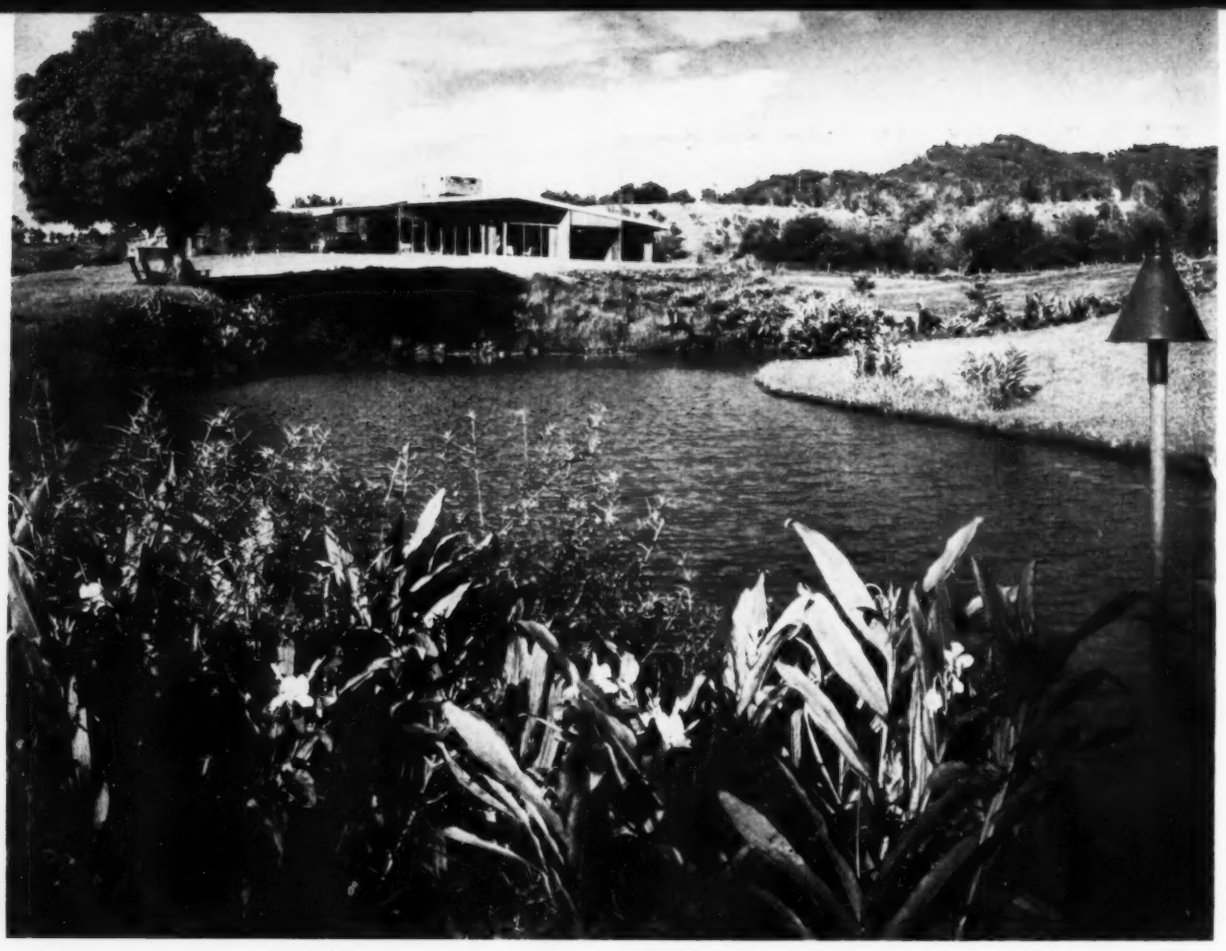


PENT HOUSE

Penthouse, originally planned as cocktail lounge and private-party area, was rented as restaurant after construction was well under way; plans had to be revised to provide much larger kitchen and dining space. Restaurant is open to public, has spectacular view, and is one of city's best

Joseph W. Molitor





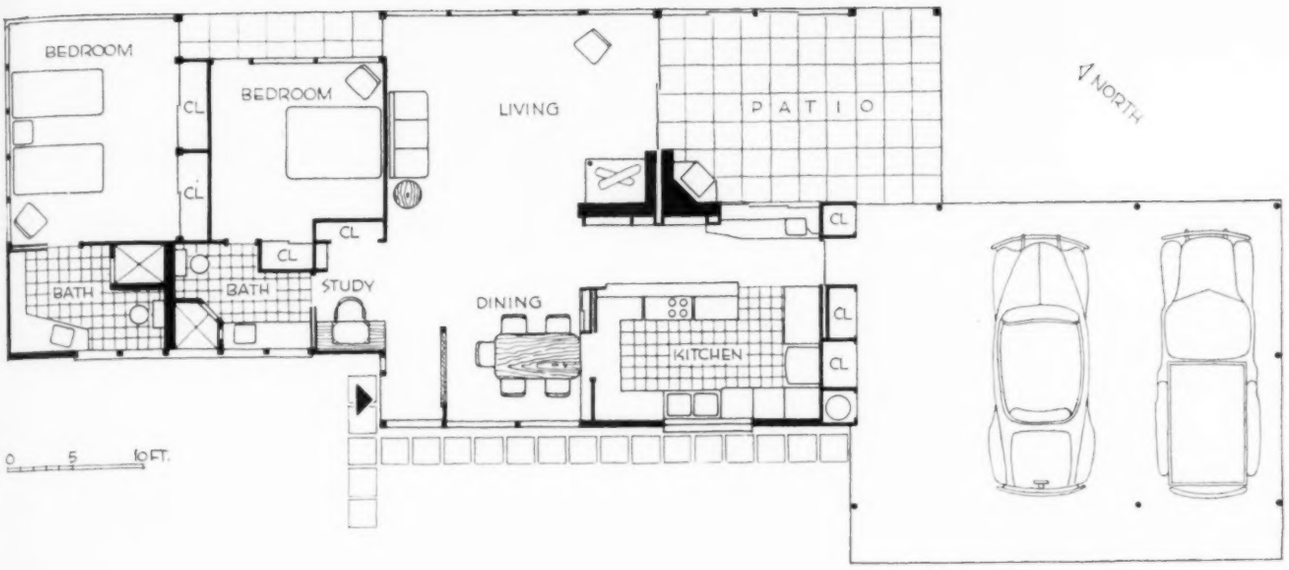
Residence of Mr. and Mrs. A. W. Duvel

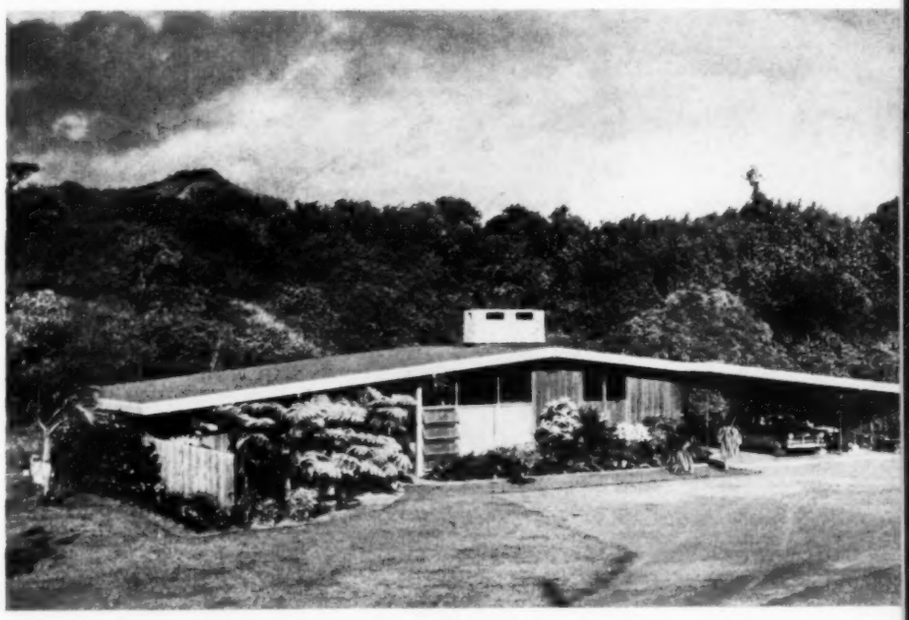
Omao, Kauai, Hawaii

Lemmon and Freeth, Architects

IN-LINE PLAN EXPLOIT U







UNSPOILED SITE

SIMPLICITY of plan and structure plus an unspoiled natural site mark this small house on the northernmost island of Hawaii.

The plan is the simplest possible answer to the owners' requirements — living-dining room, patio with barbecue and bar, study, two bedrooms and two baths. It is, moreover, as open as consistent with privacy: there are only two full-height partitions in the entire living area, one between the living room and the son's bedroom, the other the short brick chimney wall. The master bedroom is connected with the rest of the house only by the lanai; the son's room, however, intended for future guest room use, opens through its bath to the study alcove as well as directly to the lanai.

Construction is wood frame on concrete foundation. Single-board walls are 1¼ by 12-in. redwood T & G, stained on exterior, stained and waxed on interior. Roof is composition on exposed rafters and 2½-in. thick cane fiberboard sheathing. Floors are colored concrete except in bathrooms where asphalt tile is used.

The site is large, remote from the main road, and has a sizable stream flowing through it. The stream was dammed to form a pool which, with broad lawns surrounding it and a little planting close to the house, was virtually all the landscaping required. The owner, Forester for the Division of Forestry, Board of Agriculture and Forestry on Kauai, was landscape architect; his wife was decorator.



Living room, patio and lawn form one continuous living area overlooking stream and pool. Interior walls are gray with touch of red, ceilings are blue-green

R. Wenkam





Three-part living area is tied together both actually and visually by back-to-back living room fireplace and patio barbeque, each copper-hooded and brick-walled



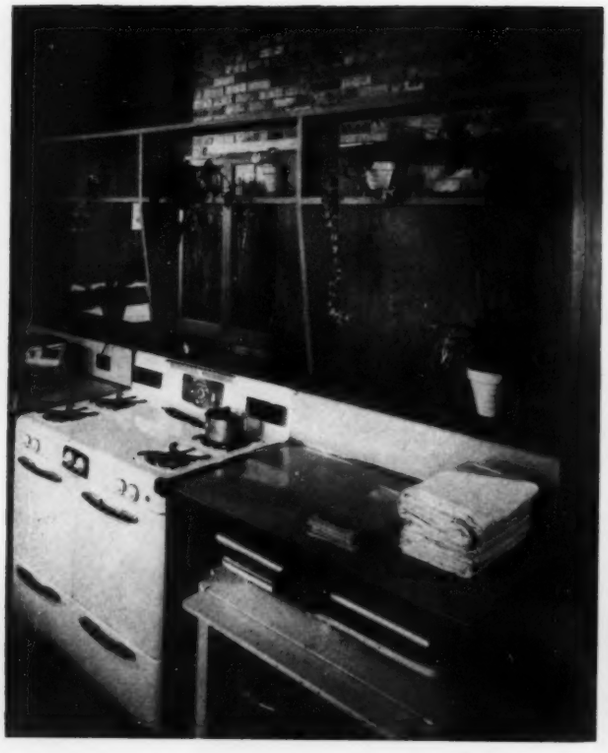
Dining area and kitchen are separated by two-way cabinet with pass-through



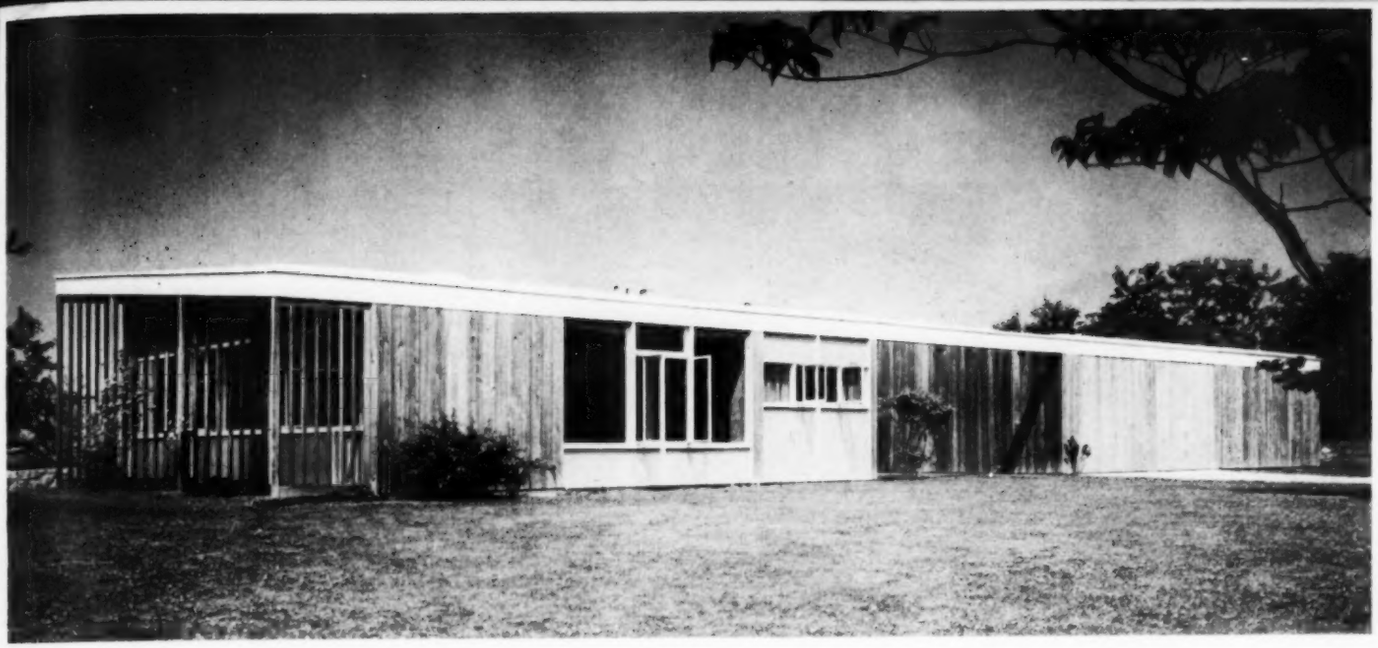


R. Wenkam

Low corrugated plastic screen separating dining area from entrance creates wonderful feeling of openness. Kitchen (below, left) has low partitions on two sides, windows on third. Below right, study alcove







SLOPING SITE FOR HOUSE FACILITATES ZONED PLAN

House for Mr. & Mrs. Ogden Kniffen, New Canaan, Conn.

Marcel Breuer and Eliot Noyes, Architects

Ben Schnal

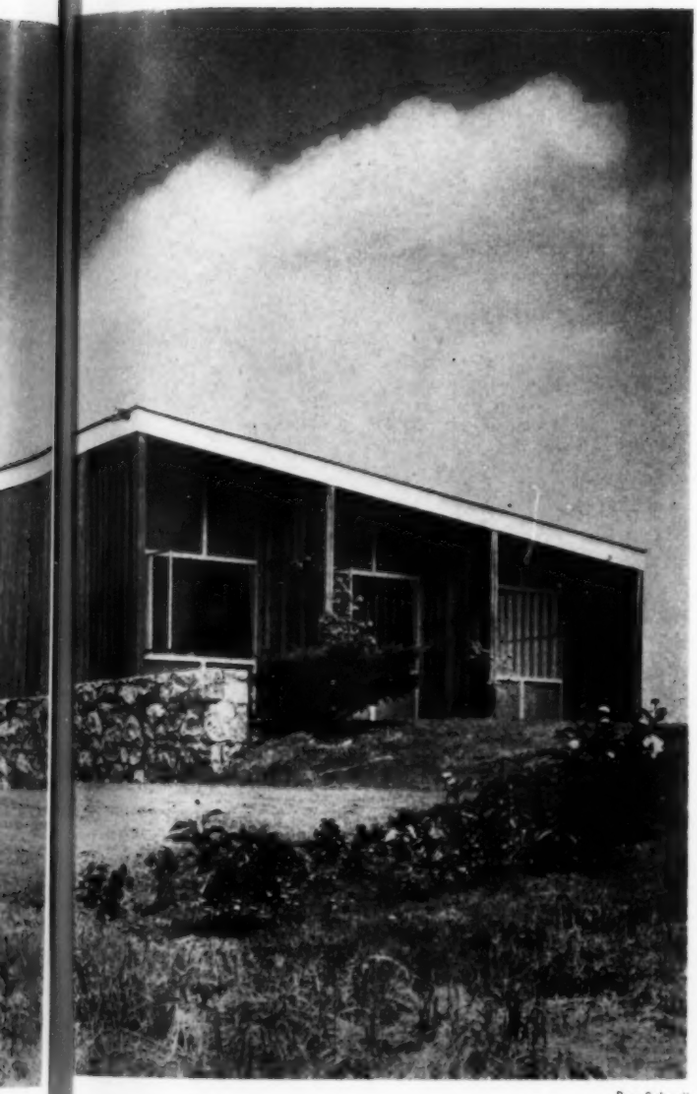




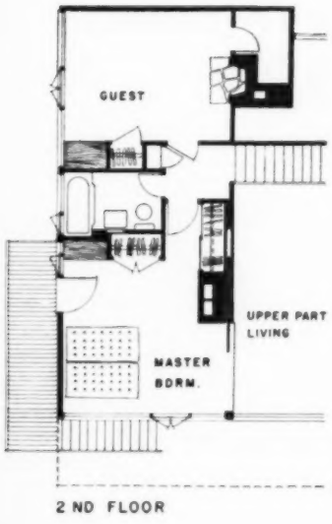
SLOPED SITE: ZONED PLAN



A SIMPLE, ONE-LEVEL HOUSE is comparatively easy to organize into the various kinds of areas needed; when several floors — and within these, numerous slight changes in level — are studied with a view to zoning them according to use, the problem tends to become complex. It cannot be as over-simplified as the current speculative builder's cliché, the "split-level house," yet it demands a simple solution. In this conventionally wood-framed house the organization of areas or zones is clearly apparent. Not so easily comprehended, perhaps, is the skill with which an open character has been maintained. The usual thing to do with the living room (see plan) would have been to open it to the south only; but using a change of level and a two-way fireplace to delimit the dining room, making the bedroom above a balcony, and opening the wall to the east court have made the room more livable and satisfying.

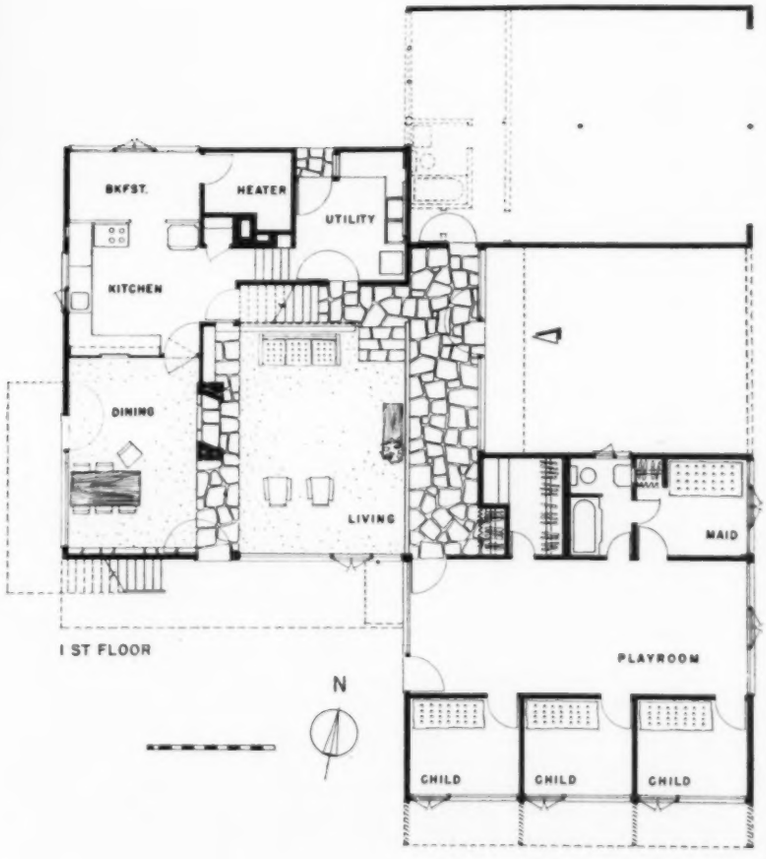


Ben Schnall



2 ND FLOOR

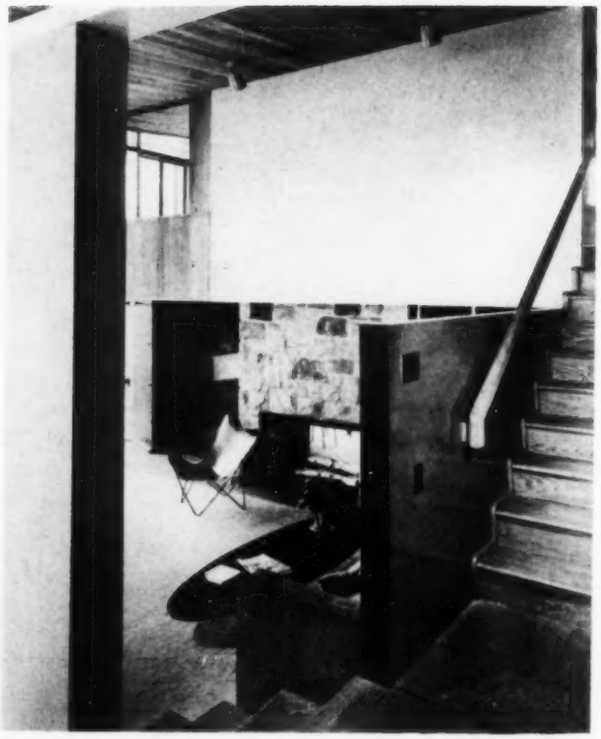
Upper floor contains adults' bedrooms; lower floor has distinct zones for **1**, *children's play and sleeping;* **2**, *living;* **3**, *utility, and new bedrooms (see below)*



1 ST FLOOR

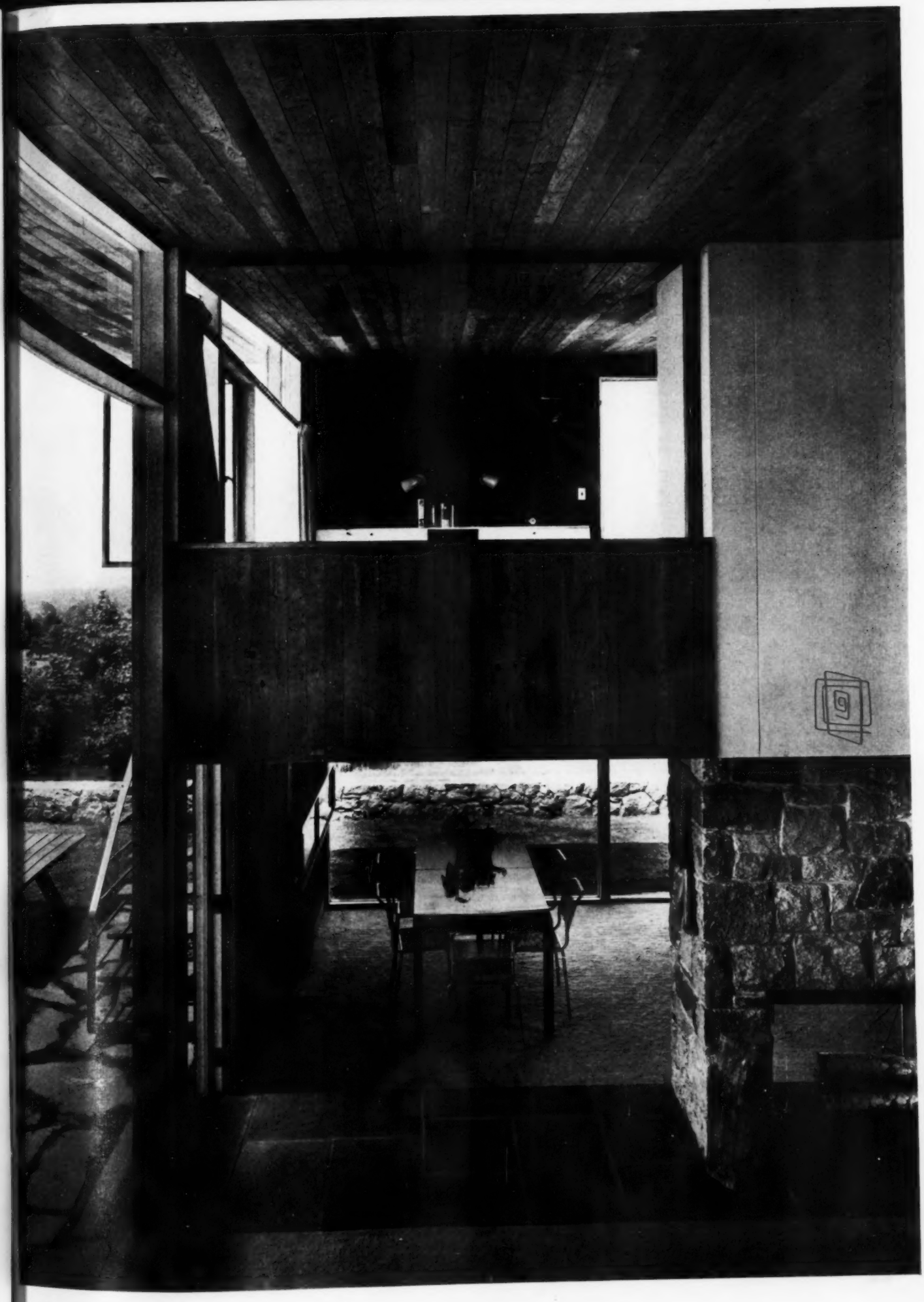
Zoned plan, characteristic of many houses by these architects and at one time a daring innovation, has here been ingeniously developed to take full advantage of the sloping site. House has been enlarged since original plan (right) was made; dotted-line area at rear of garage has become hall and powder room for access to two bedrooms, bath and storage room which extend 14 ft to north, *see photograph on preceding page*

The careful organization of space is accompanied by a pleasantly open interior; changes of level are advantageously employed. The diversity of interest in form thus produced is offset by the simplest of interior finishes: gum plywood, painted or natural; plate glass; solid carpeting, bluestone floors; T & G cypress



Ben Schnal





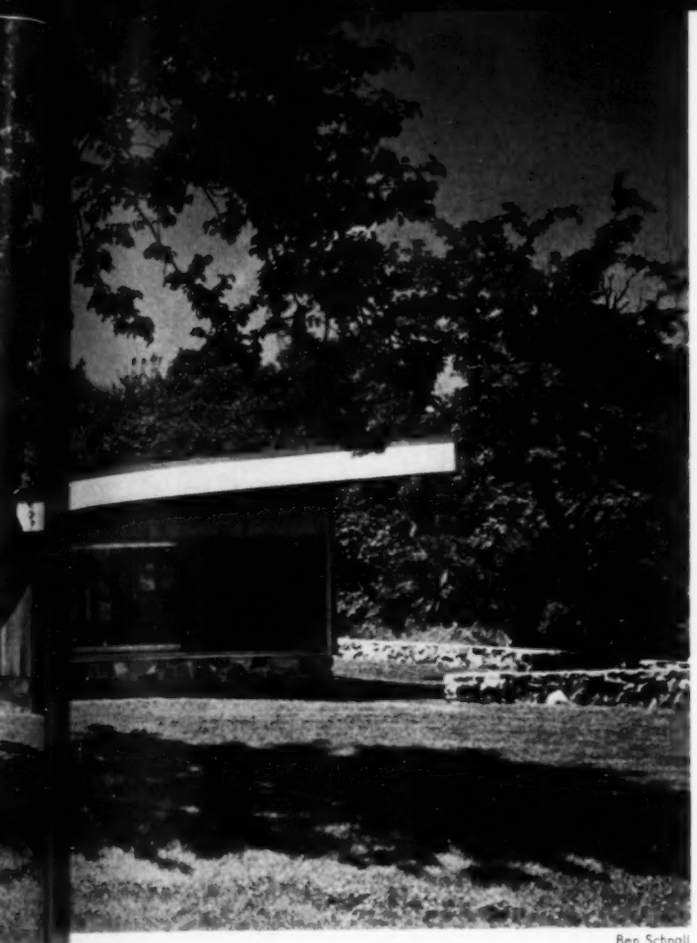


FIVE BEDROOMS CAN BE ADDED

House for John W. Hanson, Huntington, N. Y.

Marcel Breuer, Architect

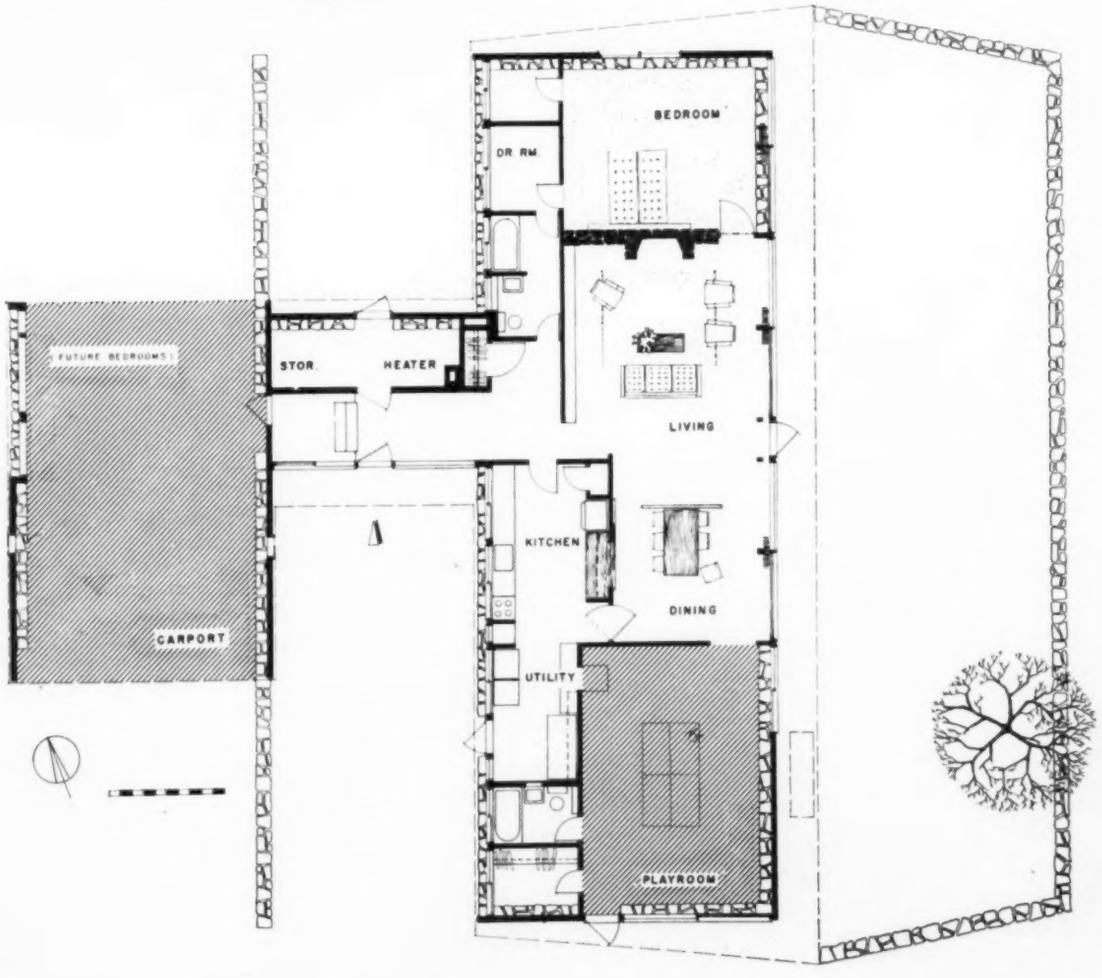
TRULY EXPANDABLE, and with the future expansion positively provided for, this house anticipates growth; change need not either prove unduly expensive or impair its original quality. The carport, which can become three bedrooms and two baths for two children and a maid, has been designed with openings ready for glazing, heating and water connections ready for extension. The playroom can be subdivided into two more bedrooms. Construction is simple wood frame on a radiant-heated concrete slab; exterior walls have vertical T & G cypress siding. The wood-framed butterfly roof roughly parallels the contours of the land, helping to fit the building into its site.



Ben Schnall



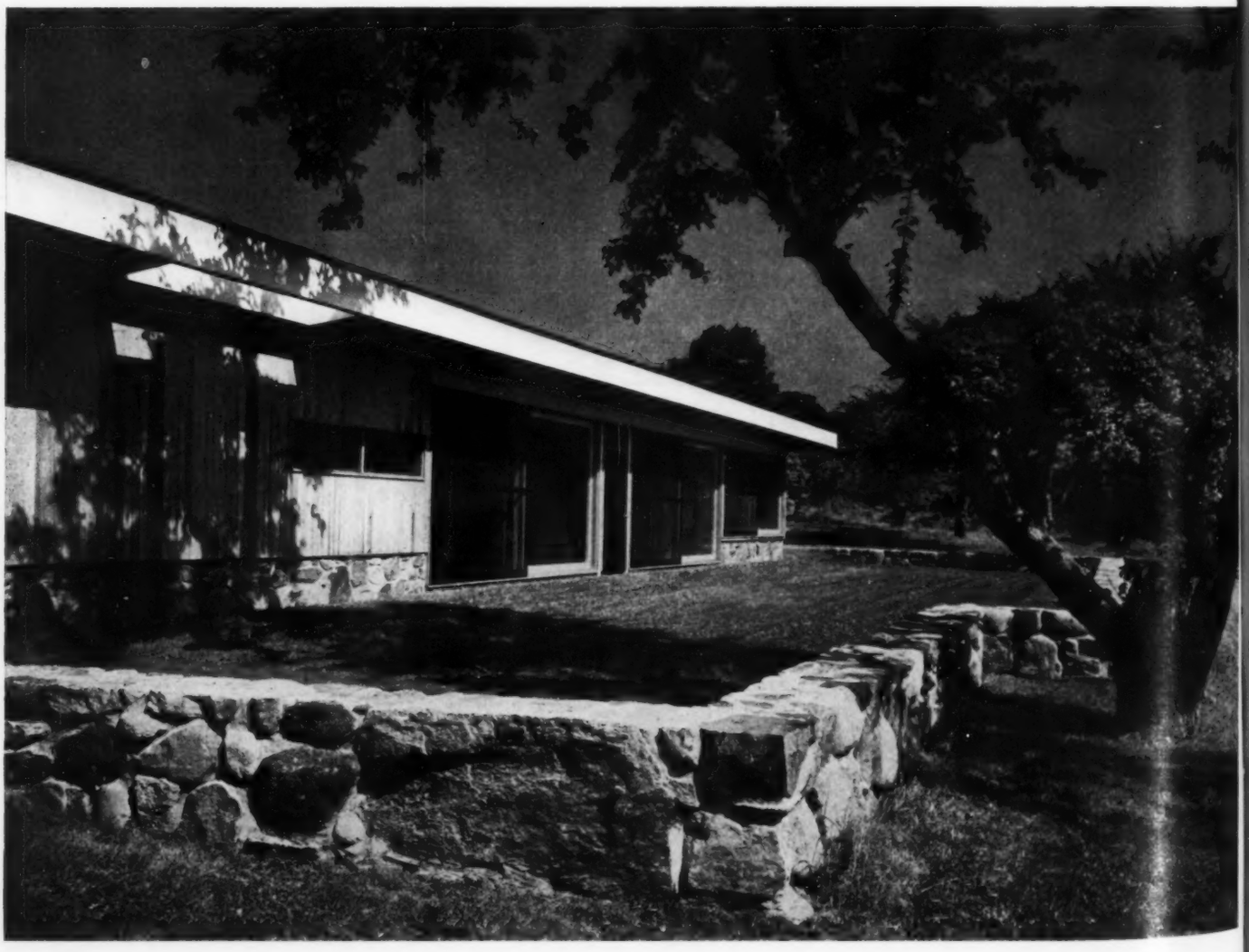
Carport and playroom of this Long Island house (shaded areas below) are designed so they can be converted into five additional bedrooms





Ben Schnall

Flagstone floor, field stone fireplace, wood ceiling and painted storage wall carry into the interior the same materials and finishes used on the exterior, heightening unity of indoors and outdoors





Roger Sturtevant

ARCHITECTURAL INTERIORS

Design | *Details* | *Materials* | *Equipment*

OUR STORY deals with the recently refurbished West Coast Sales Office for Accent, a new culinary product of the International Minerals and Chemical Corporation. The architect for the job, F. J. McCarthy, had complete charge of furnishings as well as overall remodeling of the space within a San Francisco office building.

As the visitor approaches and enters through the trim glass vestibule pictured above, he sees and is intrigued by the decorative mural, base-banked with planting. But this mural is actually more than just decoration or advertising — for the story of what it does, turn the page.

Francis Joseph McCarthy, Architect

Squire Knowles, Muralist

WHY THE OPEN-ENDED MURAL?

C. A. Von Bergen, Electrical Consultant

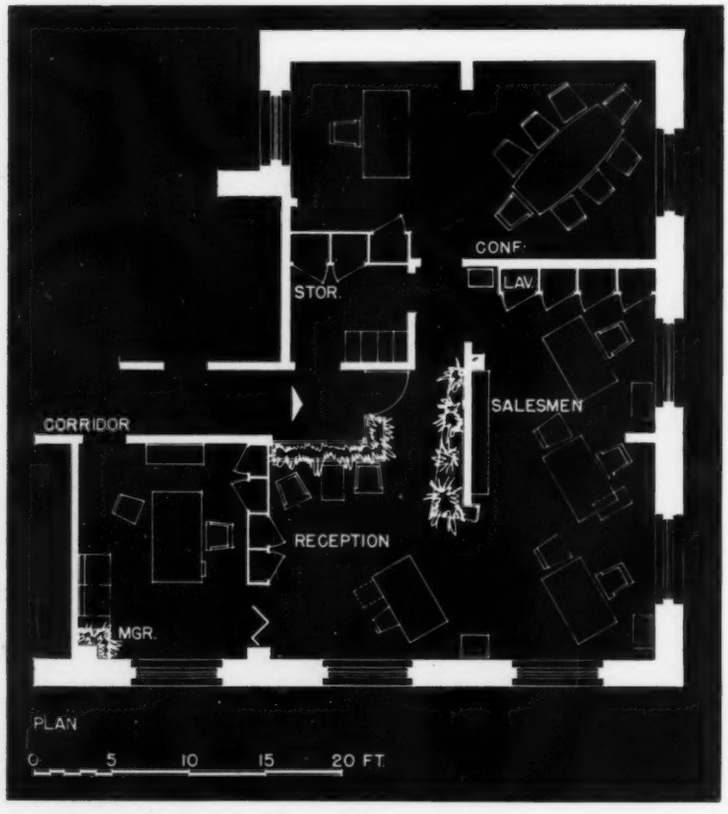
Eckbo, Royston & Williams, Landscape Architects

Oscar Presco & Son, Builders

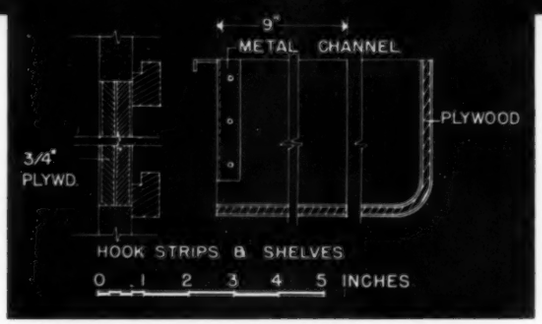
WEST COAST ACCENT OFFICE

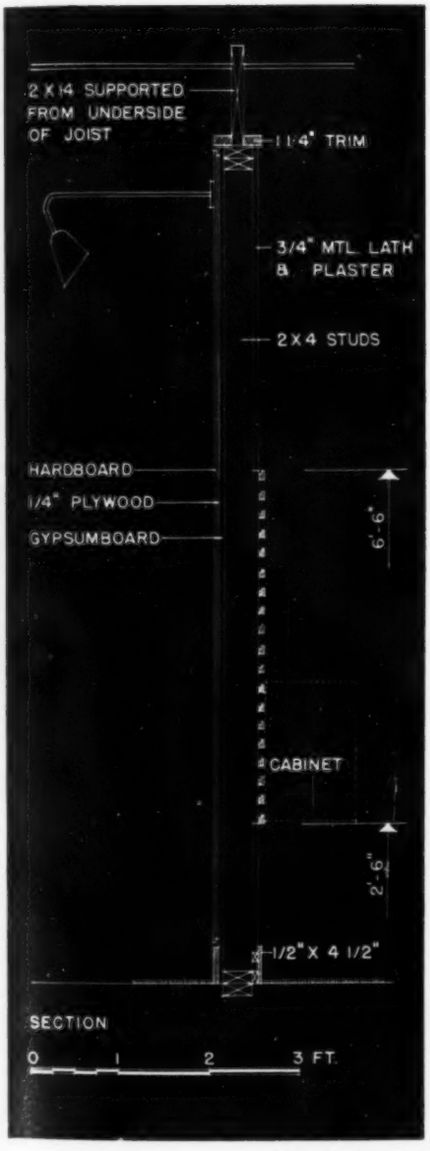


Roger Sturtevant



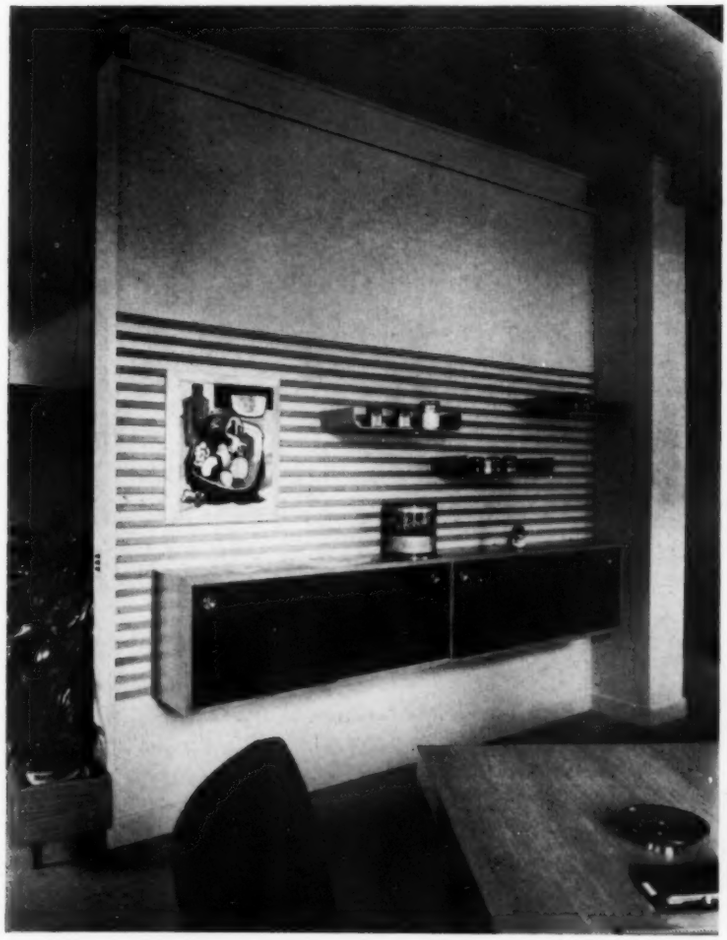
Study of these two pages will reveal that the plan is essentially an L within the larger L of the entire area, and that the open-ended mural wall forms the pivot for the entire scheme. It serves to conceal an existing column; it is a space-dividing screen that functions as both storage and display while separating sales from reception; it picks up the curving curtain track and becomes upon occasion the third wall of a curtained-off room. In addition to the main L shaped space, the plan also provides an office for visiting executives, separated from the conference area by pulling a curtain.





Drafting by Mogens Leth

On the sales side, about a third of the mural wall's height is covered by a horizontal pattern of wood hook strips upon which can be hung several bent plywood trays or shelves that can be arranged at will for display. The strips also can serve as support for pictures, charts, etc. The cabinets, furniture, and planting boxes are made of rift oak



WEST COAST ACCENT OFFICE



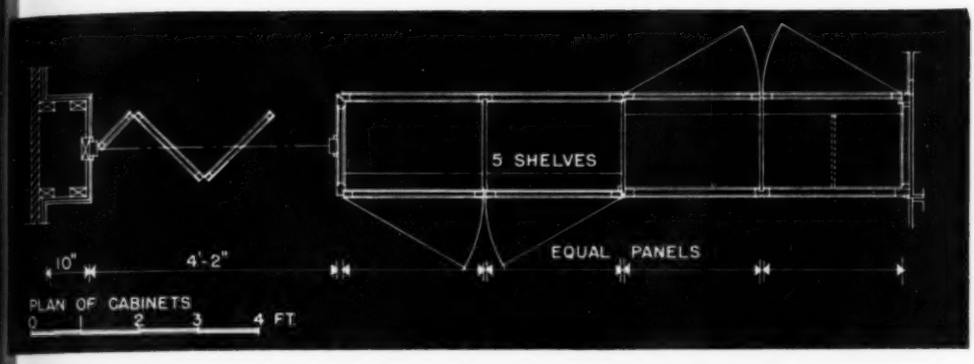
Roger Sturtevant

The four doors at rear of sales area conceal a lavatory and cabinets for storage and files. Note that salesmen do not have desks, but instead sit at



open tables for greater leg freedom, and have beside them a small telephone cabinet containing a pencil drawer, pull drawer, and file. Plaster walls and acoustic ceilings are painted gray-green; curtains and venetian blinds are gray

The sales manager's private office is separated from the general reception space by a battery of glass-topped cabinets which serve as supply storage for both areas. Note how the three folding



door leaves, which are hung on piano hinges, stay within the depth of the cabinet jamb and thus do not encroach within either of the two areas. Rift oak cabinets and furniture in natural finish;



cocoa and green upholstery; medium gray carpet; inside of cabinets painted red

THE COST of the needed school facilities remains an immense problem. In tackling it as the subject of this study we have rediscovered an axiom: that design for true economy often leads to better functioning, to improvements in education itself, and (to speak bluntly) toward architecture. Many times, the process of stripping nonessentials from school buildings not only has produced economy, but also has gotten rid of some architectural garbage whose existence impaired practical values and misdirected the cultural impact of the buildings on their small occupants. As bad as trite "ornament" is the plan cliché; some innovations widely imitated have been little understood. In these six pages you will find evidence of fresh thought applied to the finger plan, one of whose initial virtues was that, in warmer regions, it permitted eliminating the enclosed corridor. In addition to those whose "corridorless" plans are shown, Walter Anicka of Ann Arbor has been experimenting with the idea; in 1952 he reported resultant costs of $11 to $12

CASE HISTORY: CLASSROOMS WITHOUT CORRIDORS

By Eberle M. Smith

Member, A.I.A. School Committee

THIS IS A CASE STUDY of the development of three elementary schools to capture the space normally used for corridors for direct use in classrooms: the Andrew Jackson School at Ferndale, Mich., the new elementary school at Plymouth, Mich., and an elementary school for Livonia, Mich.

Basically the three schools are the finger type of plan with four self-contained classrooms in each wing; the wings are of the single-loaded corridor type. Perpendicular to the classroom wing is a connecting wing housing the activity units, multi-purpose room, library, kitchen, and other common facilities. This wing also has a single-loaded corridor.

The first unit of the Andrew Jackson School was constructed in 1949 and the addition in 1952. The Plymouth Elementary School and Livonia Elementary School, now under construction, will be completed this month.

Andrew Jackson School: Elmer Astleford photo

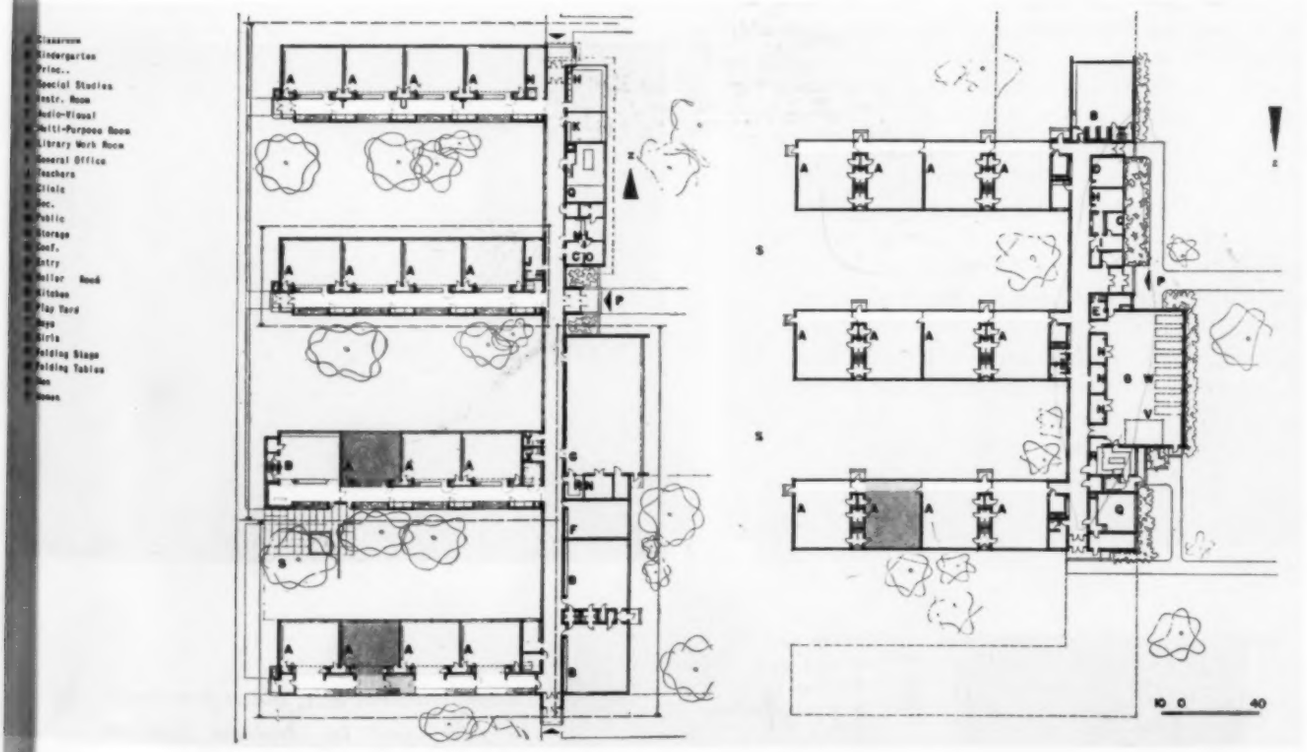


per sq ft. At present most experiments are limited to elementary schools.

The next 24 pages contain recent school buildings, all inexpensive for their time and location, most of them modernized. While modernization can be economical, there is no apparent set of standards; each job has to develop as it must.

Government agencies have been tackling economy, too. The U.S. Office of Education has a new 20-cent booklet on remodeling and rehabilitation. The New York State Education Department, in a recent statement, cites ways it has cut corners. These include "simplification of architecture," which seems to imply that architecture is superficial; and standards permitting (or requiring?) lower ceiling heights — which it avers have forced "the end of clerestory lighting and glass block construction." Should any structural device be thus sweepingly condemned, even though it be somewhat expensive or possibly rather tired?

This case history is appearing also in The Nation's Schools



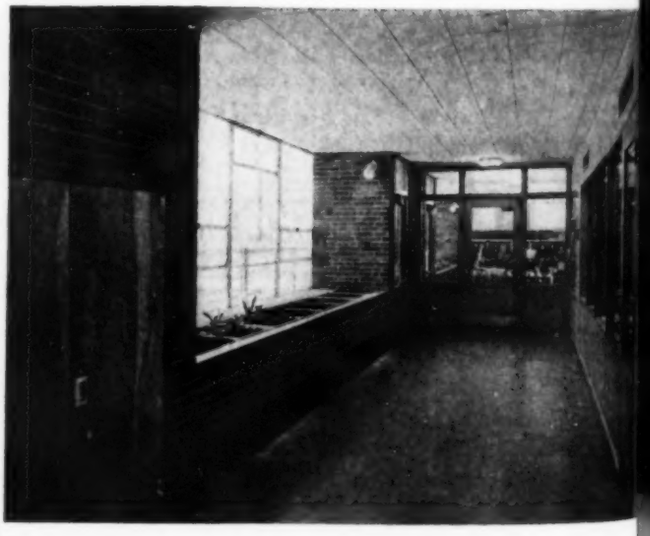
Two Michigan schools designed by Eberle M. Smith Associates, Inc., contain classroom units described in text. Left, Andrew Jackson School, Ferndale; original three wings at top show first stage of development; fourth wing, added later, shows classroom increased by incorporating corridor area. Right, Plymouth Elementary School, third stage; overall wing width slightly reduced, classroom area large and unified

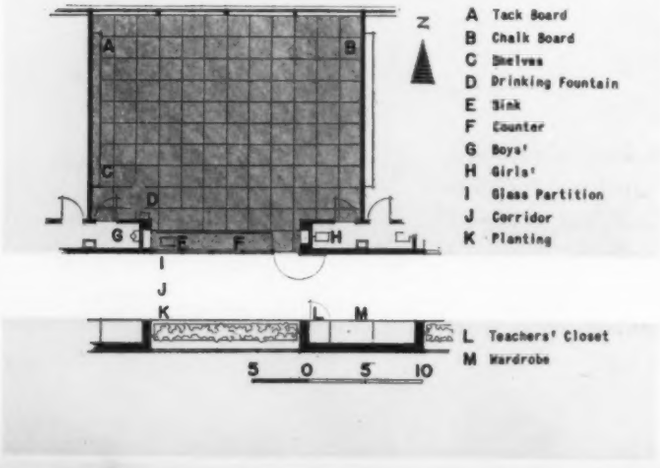
FIRST STAGE OF DEVELOPMENT

These classrooms are constructed with large windows facing the north and with a secondary source of light from the south by means of a clerestory over a depressed corridor roof. The partition between the classroom and the corridor is transparent glass and creates a feeling of great openness into the corridor and beyond to the large windows of the exterior corridor wall. Under these windows is placed a continuous planting box, entirely visible from the interior of the classroom. Immediately adjoining this planting box in the corridor are wardrobes for the classroom occupants. This open planning between the corridor and the classroom effects a partial use of the corridor as a secondary activity space aimed principally at experiments in nature study and growth of plant materials.

During construction of this first wing an unusual situation led to exploring further a more extensive use of corridor space. The contractor experienced considerable difficulty in obtaining certain materials, including the cabinets and glass partition work which divided the corridor from the classrooms. As there was a great deal of pressure to occupy the school as soon as possible, it was occupied before this actual partition between the corridor and the classrooms was installed. The teachers found that it was very easy to make great use of the corridor space, extending the classroom to include the full width of the corridor. Of course, the corridor space ran continuously between the classrooms and consequently there was no physical barrier between the classrooms at this location. Curiously, the teachers who had to use this space as a temporary expedient found that they experienced very little annoyance from noise in the adjoining classroom and apparently it was no handicap to them. In fact, they hoped that this glass partition and cabinet work could be left out permanently.







Above, photos; left, plan; first stage as developed in Andrew Jackson School. Note glazed partition separating corridor and classroom

SECOND STAGE OF DEVELOPMENT

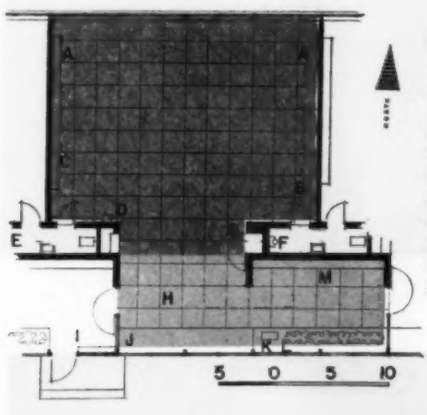
When the demand for additional space on the Andrew Jackson School was great enough to require construction of an additional wing, a teacher-community-faculty group was set up to determine just how the lesson learned in the first unit could be incorporated in the new wing. There was divided opinion on just how much the open feeling between the classrooms and the corridor could be developed without interfering with normal teaching processes. Some felt that the experience on the first wing indicated that the teachers could work with no physical barrier in the corridor area. Others felt that there was a necessity for some kind of physical barrier between classrooms. The scheme finally incorporated in the plans was a compromise; it was decided to provide a physical barrier between the adjoining classrooms in the space formerly used as a corridor. At each classroom this corridor space was divided into two areas. One was an activity area as an adjunct to the normal classroom floor area. This contained the counter space and sink. In the second was placed the planting box for raising plants and the wardrobes for the children's coats and hats. It also served as a vestibule, with one doorway leading directly outside and another to the adjoining classroom. This has worked out very successfully. The breaking up of the corridor space into two areas provides an informal atmosphere and also provides a shield to prevent the direct rays of the sun from penetrating too far into the normal classroom area.

Photos and plan, second stage, Andrew Jackson School; glass partition omitted and elements reorganized. Former corridor space becomes in effect an activity alcove



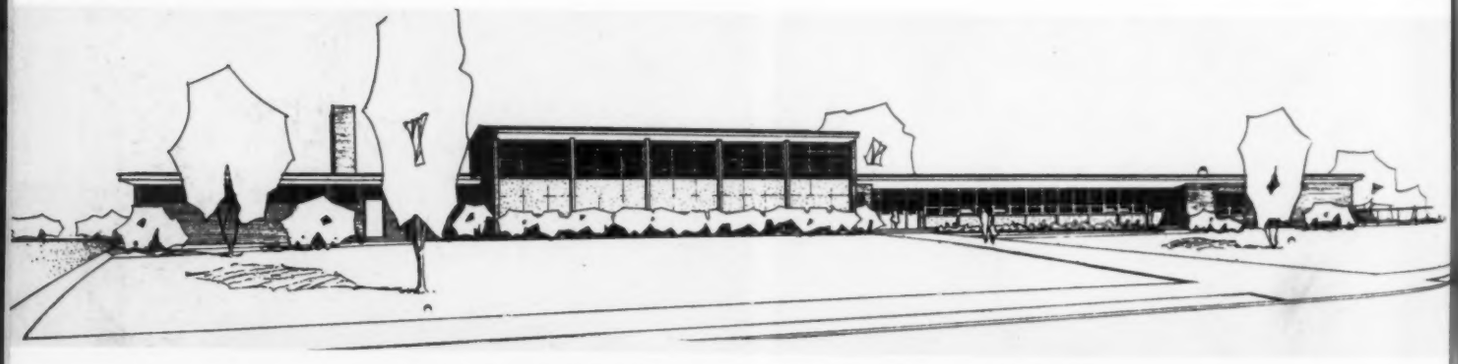


Elmer Astleford

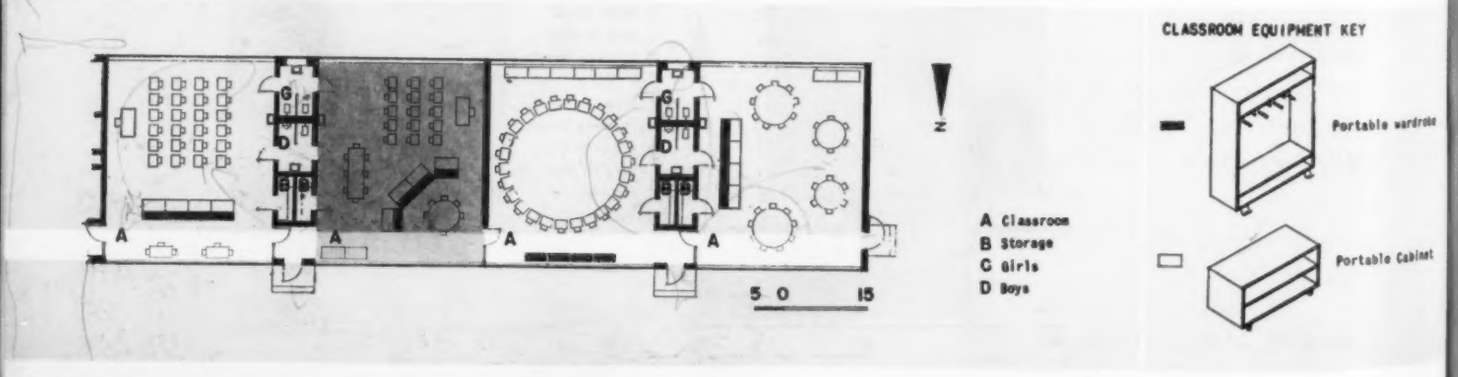


THIRD STAGE OF DEVELOPMENT

In planning the schools at Livonia and Plymouth, it was determined to explore further this idea but to approach it freshly in regard to arrangement and construction of the room. Accordingly, a plan was developed based on a "through" type of classroom with equal fenestration on two sides. In effect, this would allow the "front" of the classroom to be on either of the two walls running perpendicular to the exterior walls. It was decided not to place toilets and storage facilities between the classroom and the space normally used as a corridor, but to locate these facilities in islands between each pair of classrooms. This allowed complete freedom in construction and framing of the roof and also eliminated the necessity for clerestory or overhead lighting. Because the fenestration would be on two opposite sides, it was felt that the roof and height of windows could be held to 8 ft 10 in. It was decided to use a hipped roof in order to create a quality as nearly domestic as possible. The low corridor heights and exterior roof line are expected to improve the scale and atmosphere of the building. Direct egress is easily provided from a vestibule immediately adjoining the island space between each two classrooms. The use of movable wardrobes and storage cabinet facilities allows almost unlimited possibilities in arrangement of the rooms to suit the individual teacher's and superintendent's desires. It is anticipated that the higher wardrobe storage facilities can be arranged to provide some means of shield to prevent too deep a penetration of the sun's rays on the southern exposure.

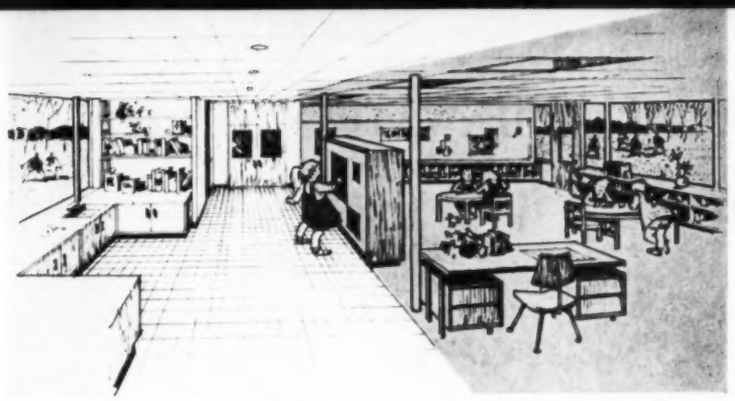


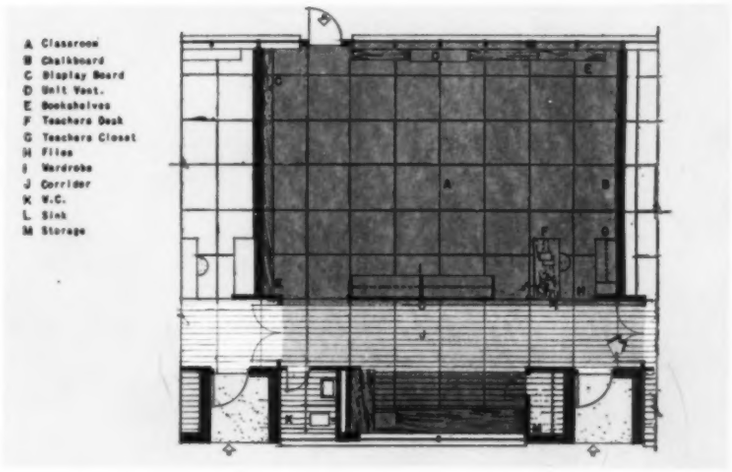
Above, perspective, Elementary School, Plymouth (plan on preceding page); below, typical classroom wing in Plymouth School shows third stage. Furniture arrangements demonstrate flexibility of the unified space, use of portable storage units as subdividers and sun shields



McLeod & Ferrara, Architects

EXPERIMENTAL SCHEME, WITH DOORS

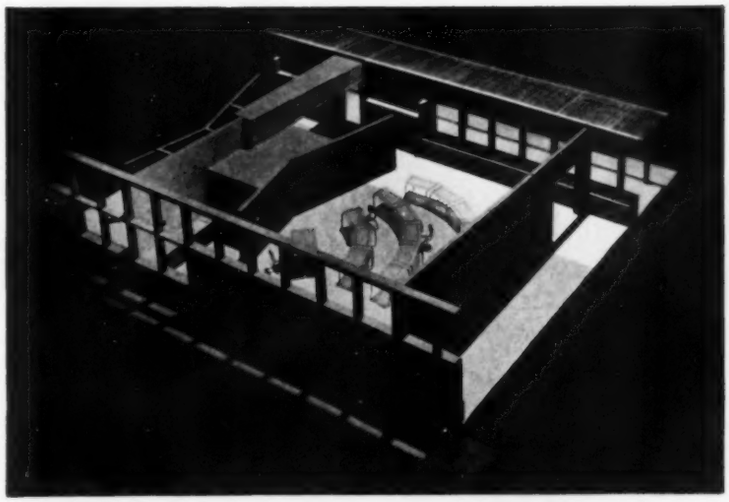




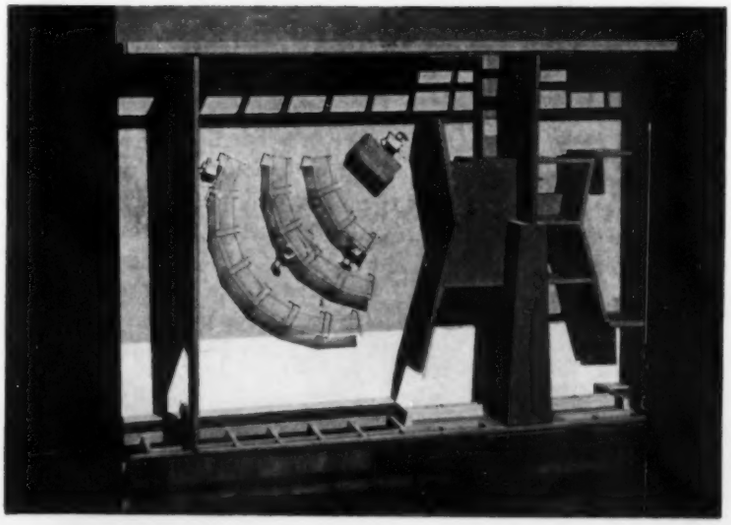
Developed independently of examples in the preceding case history, this experimental solution contains a combination of fixed and portable equipment; in plan it is closer to conventional practice, resembling somewhat the intermediate development previously described. It possesses certain definite characteristics: ceiling all in one plane; permanent work counter; sheltered exterior doors; exterior windows for toilets. Replacing interior corridor wall with lally columns probably cuts framing costs. Reduced glass area on one wall might necessitate skylights as indicated

Swanson Associates, Architects

SAME OBJECTIVE, DIFFERENT APPROACH



Richard Shirk

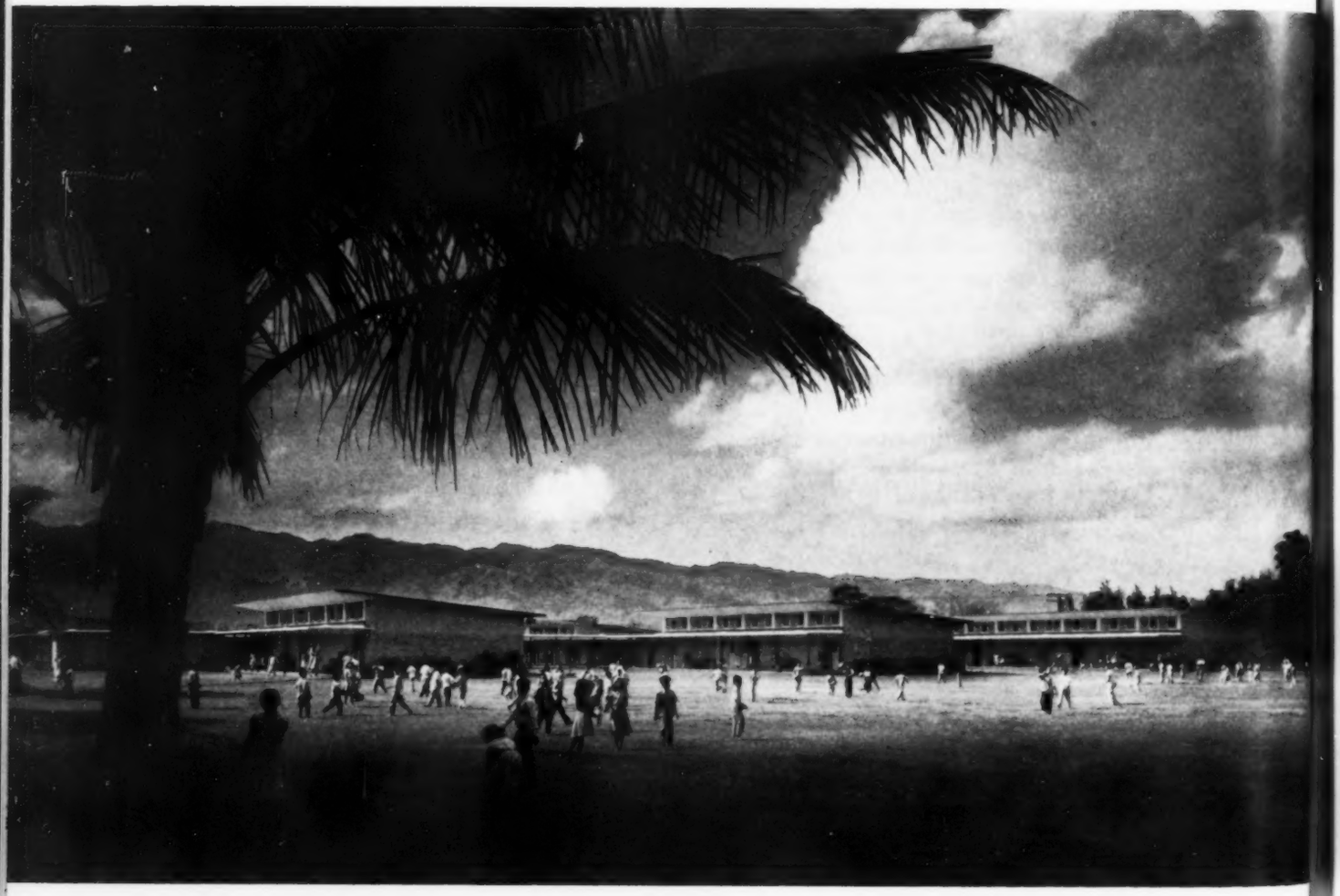


Another variant, developed independently following the earlier Michigan experience, is to be used in all wings of a new Ferndale school. Each pair of rooms has a "mechanical core" containing toilets, activity area, storage, work space, entry. Scheme provides extra outdoor circulation with translucent roof, clerestory; has high windows plus ample tack board on north wall, for privacy from outdoor areas between wings. Classroom wall of mechanical core has chalk boards with hinged portions permitting board to be used like a cyclorama. There are no doors between classrooms; acoustical treatment is relied on to minimize noise. Cost is expected to be 10 per cent less than conventional design

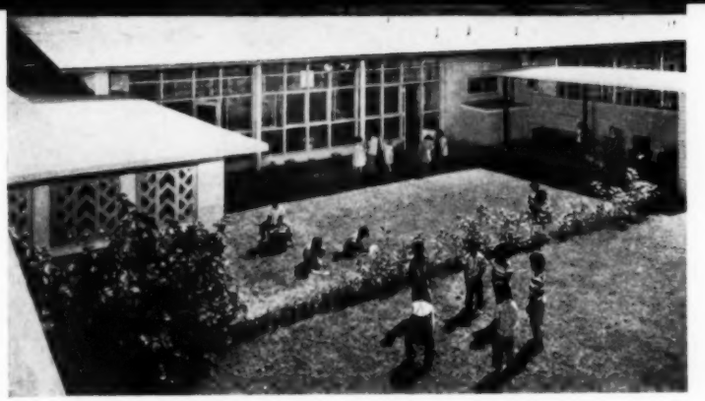
HAWAIIAN SCHOOL: ADDITION, EXPANSION

Waialua Elementary School, Waialua, Oahu, Hawaii

Law & Wilson, Architects & Engineers:
Lo & Katavolos, Consulting Engineers



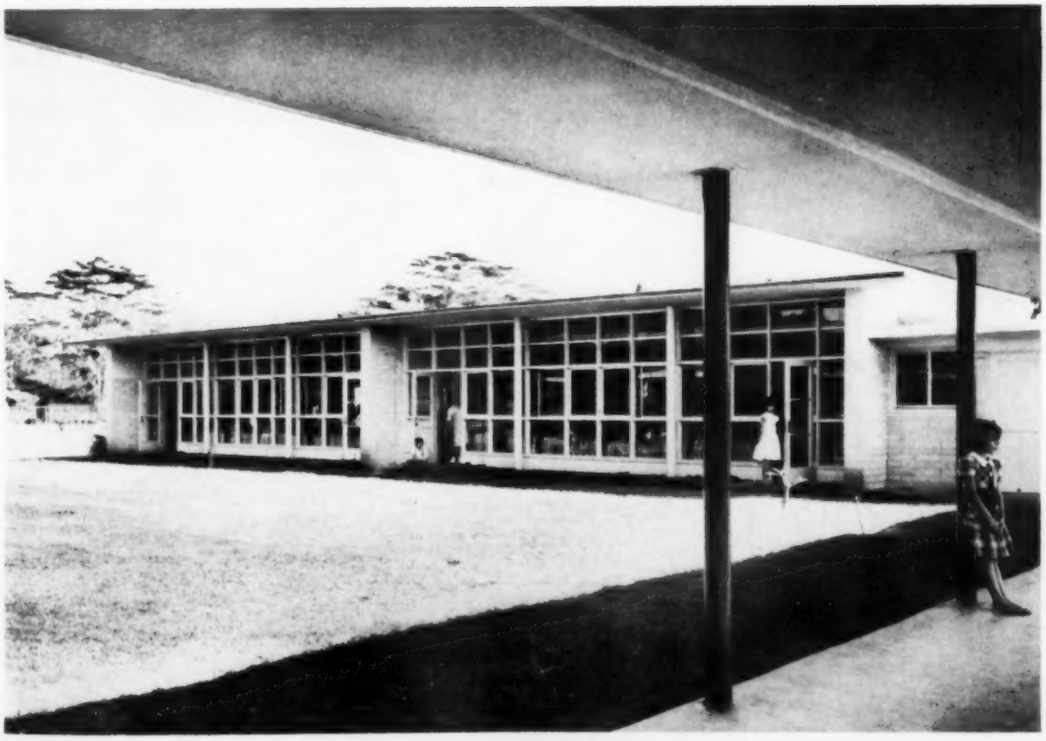
WHEN IT WAS EXHIBITED at the convention of the American Association of School Administrators at Atlantic City last February this school attracted much favorable comment. The work shown is an addition to outgrown facilities. The architects had also to provide a master plan for future expansion to replace some existing unsatisfactory temporary structures, and to include a cafeteria and auditorium and activities buildings. The existing permanent buildings were not suitable either in character or construction to the local climate and terrain, so it was decided to make a complete departure in design and present the new buildings frankly as "new growth," depending for unity on their physical relation to the old buildings. The new buildings contain four kindergartens and 16 elementary classrooms in a number of separate units connected by covered walks. They have a modified slab and beam roof structure supported on reinforced concrete block walls, and on steel pipe columns at the window walls. The semi-tropic climate, cooled by constant tradewinds, is so nearly ideal that no heating or cooling system was installed.



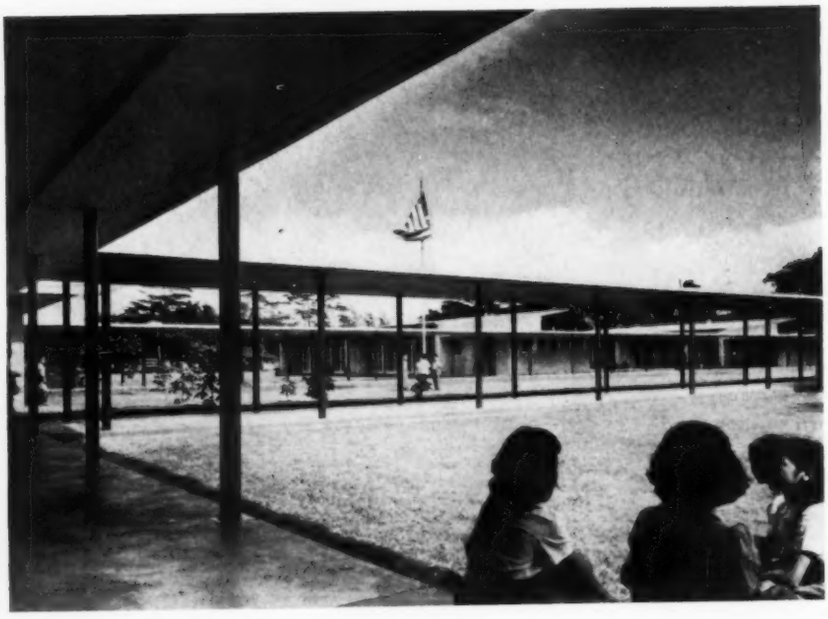


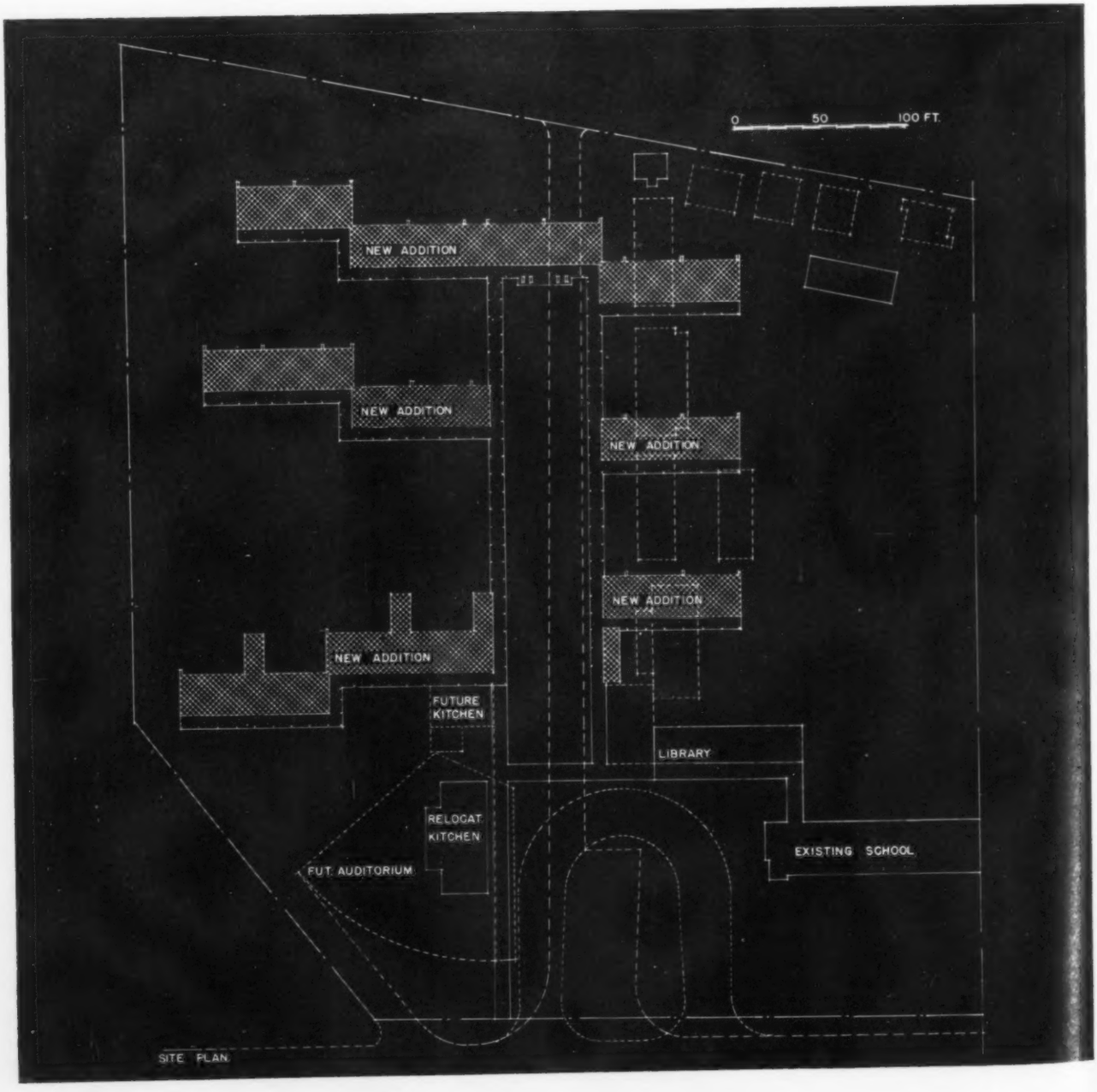
The addition was built in 1950 by Ben Hayashi, Ltd. Area: Total enclosed, 26,169 sq ft; covered walks (cost figured at ½), 14,916 sq ft; total area, 41,085 sq ft. Cost: Total $309,800; per sq ft, $9.212; per pupil, $516.33. Number of pupils: 600

R. Wenkam

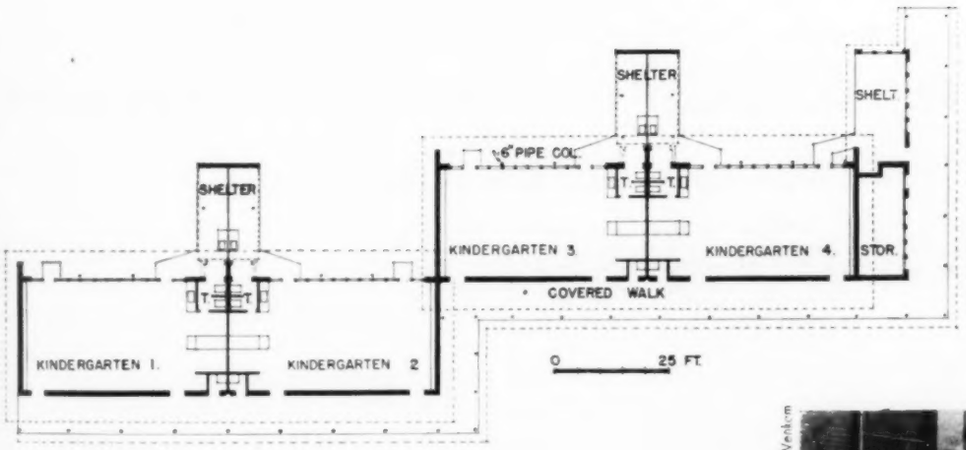


SCHOOL ADDITION: HAWAII







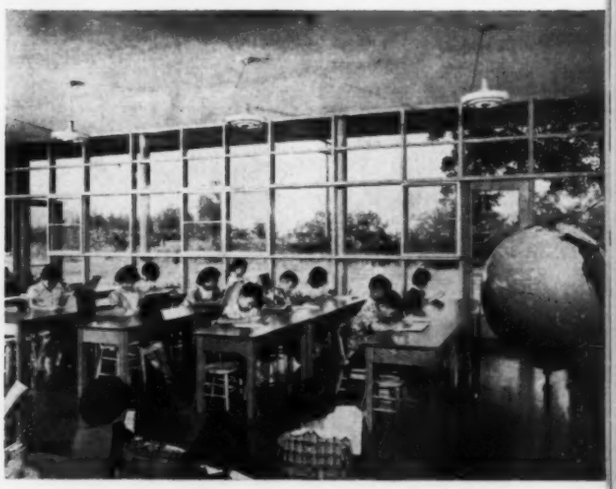


Site plan, left, shows new work (cross hatched); part of existing plant (solid line; see also photo below); future plant and buildings removed (dotted lines). Plan above, kindergarten unit; other classrooms similar. Photos at right, typical classroom; lighting and ventilation are controlled and balanced by louvers and sliding aluminum sash in clerestories

R. Wenkam







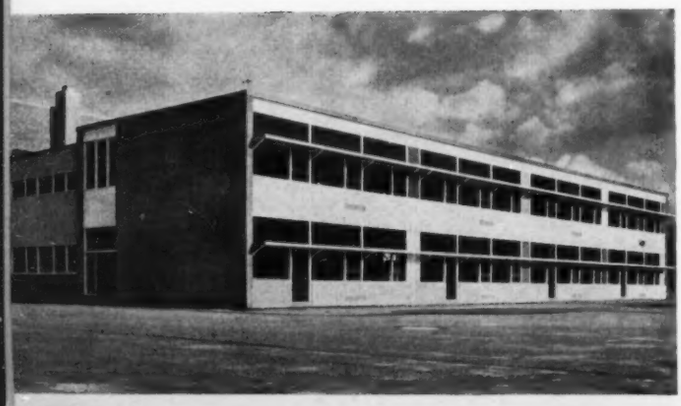


PENNSYLVANIA SCHOOL: LOW-COST ADDITION

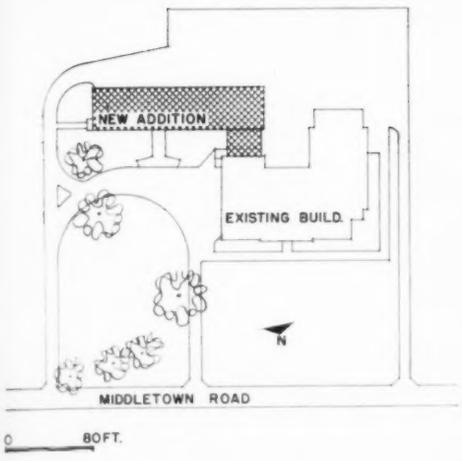
Lima Elementary School, Delaware Co., Pa.

Clifford E. Garner, Architect
Engineers: Structural, A. E. Ericson;
Mechanical, L. S. Tarleton

THE LIMA ELEMENTARY SCHOOL addition had to be built at a cost within the $175,000 bond issue. Construction started at about the time materials restrictions were most stringent. Though there were thus two strikes against it from the start, the job was completed for a total cost of $165,580, which left enough not only to reroof and install oil burners in the existing buildings, but also to furnish oil burners for another school. Simple and economical in design, the addition relies upon its red brick exterior veneer for compatibility with the existing, rather nondescript school (1925 vintage with brick pilasters and abundant verticality); and its severity is relieved by strong color both on exterior panels and on two walls of each classroom. The other two walls of all classrooms are neutral gray. The somewhat unorthodox — and quite successful — steel fenestration (see below) adds to the freshness of the design and helped reduce cost. Floor heights were kept lower than in the old building. Construction is exposed steel framing with concrete slabs and lightweight concrete block walls and partitions. Plan, shown and discussed on succeeding pages, is an ingenious solution of an almost impossible problem.

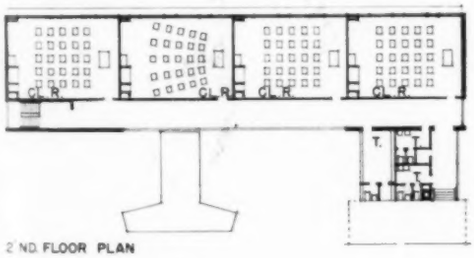


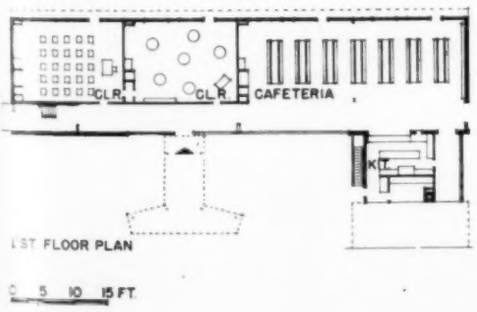
South façade (photo at left) has heat-reducing green glass panels above the metal sun visor. Strong color, used inside and out, has been most favorably received by both staff and public











Top of page, cafeteria which is also multi-purpose room. Above, single-loaded corridor. In both, note the exposed, low-brightness fluorescent lighting. Below, stair hall

Berry & Homer





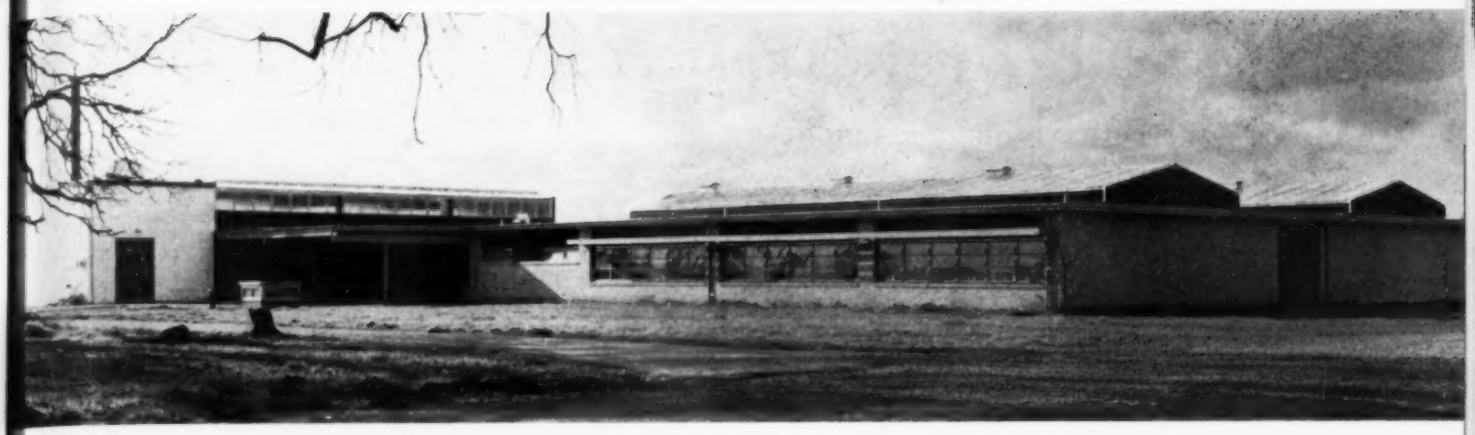
Berry & Homer

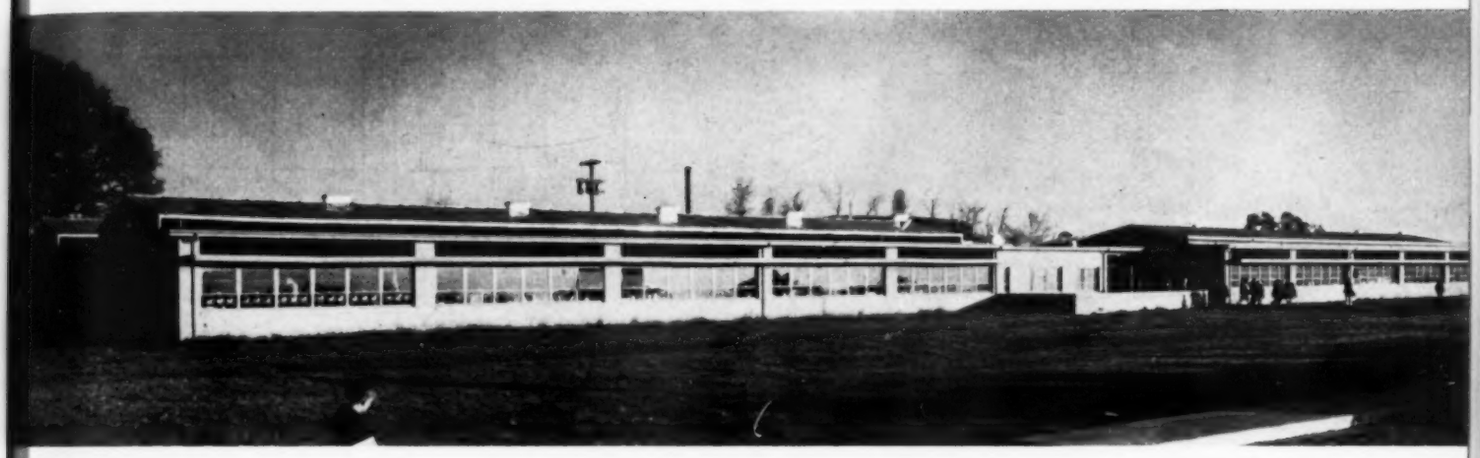
Left, typical classroom also has exposed fluorescent lighting, gay color, pleasant atmosphere. Bottom of page: cantilevered entrance canopy

PENNSYLVANIA ADDITION

The site of Lima Elementary School was inadequate anyway, so an addition to the building — handled as this one is — could hardly impair, as it could not improve, site conditions. The old building had toilets on the ground floor, none on the second. The new wing is so attached that rooms on its ground floor are near the old building's toilets, and new toilets were provided on the new second floor to serve both old and new classrooms. Economies also resulted from the location of the cafeteria-multi-purpose room, which is used for pupil circulation as well as meetings without devoting space to a separate corridor; and from elimination of parapets. Costs were all well below the averages for the locality at the time: Total cost, $165,580; per cu ft, 92c (average, $1.15 to $1.30); per sq ft, $11.91 (average, $15 to $19); per pupil, approximately $700 (avg., $1000 to $1500); classroom, about $21,000. Area: 13,186 sq ft; cubage, 171,648 cu ft.



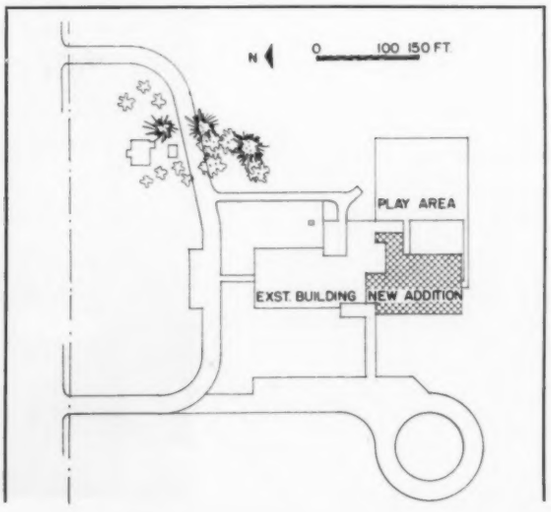




Tom Burns, Jr.

TOP-LIGHTED OREGON SCHOOL BUILT IN TWO STAGES

THE FIRST PART of Clear Lake School (labeled "existing" on site plan below), built in 1951, contains eight rooms for grades one to three and a multi-purpose room, has 16,701 sq ft, and cost $141,770. The second portion (labeled "addition") has eight classrooms for grades three to six, in 11,990 sq ft, cost $112,400. The architects do not regard its cost as low for their vicinity: total, $254,100; per sq ft, $8.85; per pupil, $530 (480 pupils). It is a substantial, wood-framed structure with exteriors partly brick, partly cedar boards and battens. Its interiors are treated with bright, cheerful colors wiped on the plywood walls and covered with flat varnish. Contributing to the school's warmth and friendliness are the low ceilings — and, most importantly, a system of skylighting which is the most recent of a series of experiments, in several schools, with overhead daylighting. The architects believe this is the only way to use natural light fully, satisfactorily and economically.



Clear Lake Grade School,
Lake County, Oregon

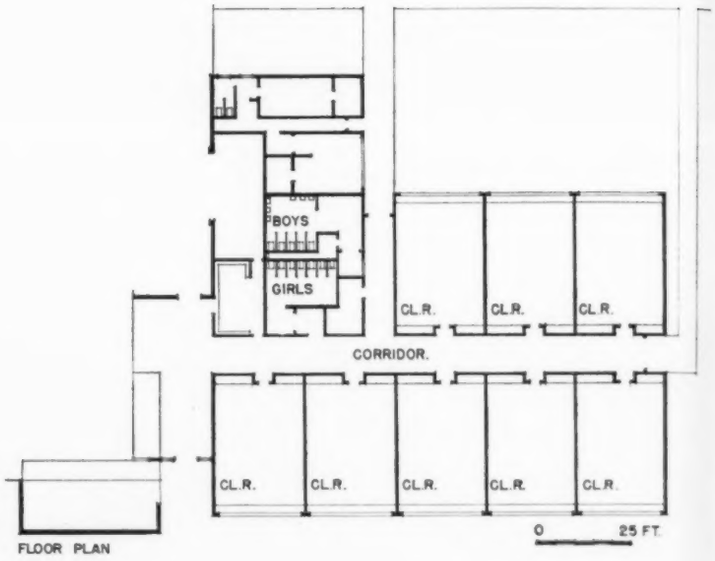
Wilmsen & Endicott, Architects

Engineers: T. C. Jamieson, Mechanical
W. C. Matson & Assoc., Electrical



Tom Burns, Jr.



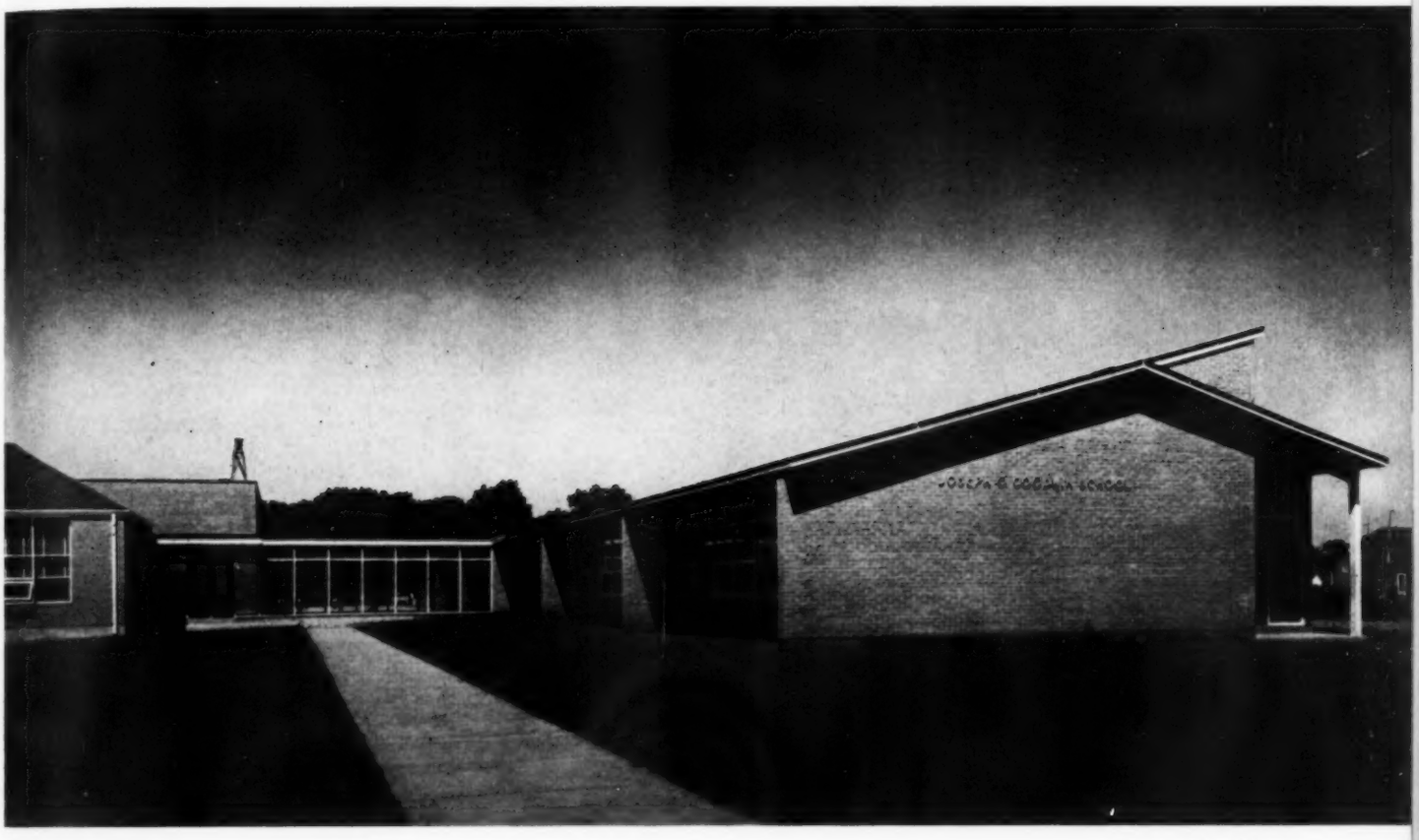


Above, plan of 1952 portion, Clear Lake Grade School. Corridors are offset (photo top left) to minimize tunnel appearance. Classrooms, 24 by 38 ft (left and below), in both portions are end-on to reduce corridor and exterior wall length; continuous skylight 24 ft wide is centered over each bank of classrooms

Skylighting is diffused by motorized baffles operated separately by each teacher. Photoelectric controls can be installed later if needed. Normal windows are for psychological effect only; on a typical rainy, cloudy Oregon school day skylights provided 200 to 270 foot-candles in seating area, 90 to 150 under solid ceilings, with louvers set at 45 deg. Possible improvements: heat-absorbing glass and exhaust fans to cut heat gain in spring and fall; however, this heat gain reduces heating cost in winter



CONNECTICUT SCHOOL REHABILITATED AND ENLARGED



Joseph W. Molitor

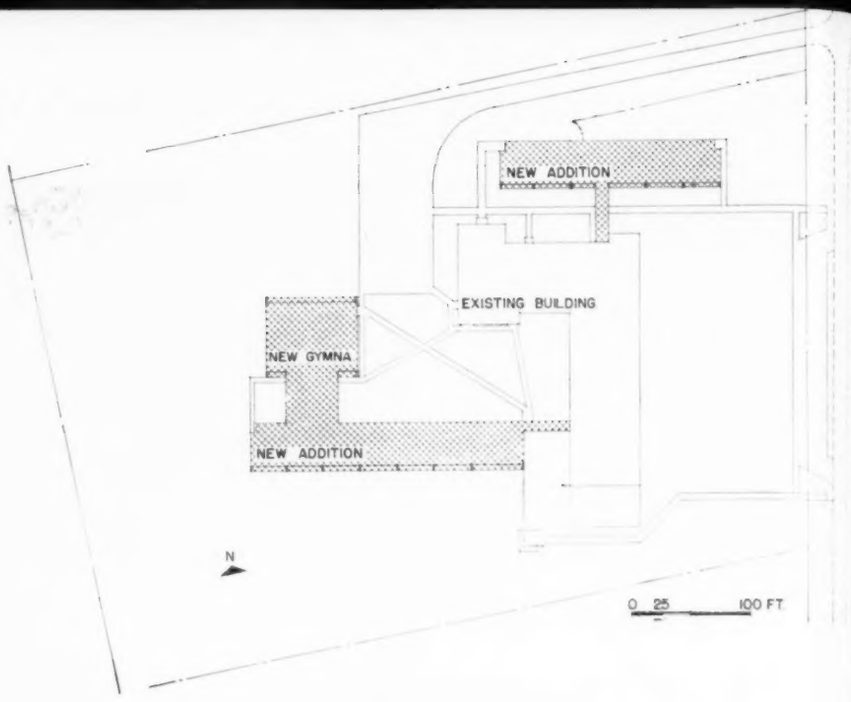
Joseph O. Goodwin Elementary School, E. Hartford, Conn.

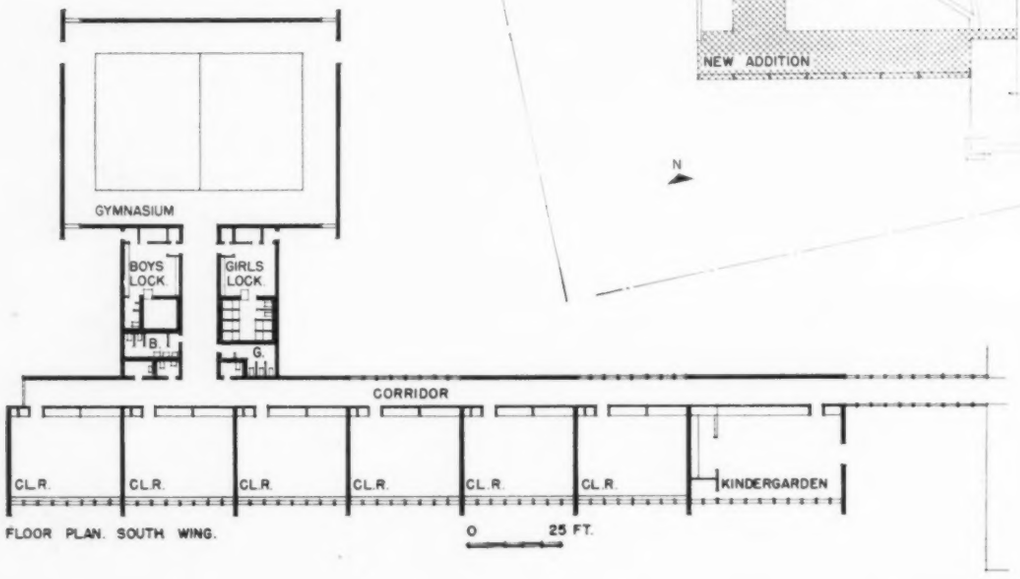
Charles H. Brewer, Jr., of Whaples & Brewer, Architect

Engineers: Henry Pfisterer, Structural; H. Van Zelm & Assoc., Mechanical

EAST HARTFORD," said the *Hartford Times* of Nov. 29, 1952, "is racing the stork and developers of housing tracts to provide school facilities." This school plant had 630 pupils prior to 1952, 877 in the '52–'53 school year and this fall expects well over 1000. The municipality's schoolhousing problems were so acute that an existing school on this site, built by the Federal Government early in World War II as a temporary structure, had to be considered for remodeling. The school was in a state of disrepair, but its roof, foundation and some framing were usable and its sound plan suggested that additions were feasible. Cost of moving some items, such as administrative office and vault, boiler room, kitchen and cafeteria, meant that these became the core of the new plan. New wings were connected to the old by glassed-in links which in one case formed a new lobby. The old building's interior, somewhat rearranged, received new wall and ceiling finishes and built-in equipment. The unified plant has 14 more classrooms than before (total 27), gymnasium, and combination auditorium-cafeteria. New portions are radiant heated and clerestoried, with single-loaded corridors. In the old portion, double-loaded corridors have plastic skylights. Area of new work is 26,560 sq ft; of remodeled, 19,200; total 45,760. Cost: new work, $335,919; old, $83,460; total, $419,379. Adding the initial cost of the existing building the total would be about $600,000 — just half that of each of two schools of the same size built recently for the same Board of Education.

Existing building dictated organization of enlarged plan (right; lower grade wing below). Photos, bottom left, connecting corridor; right, gym interior. Note use of mill-built wood windows, laminated arches. Unique radiant heating system has supplies running under windows, in form of finned-tube radiation, to heat ventilating air. Fiping is simplified, system economical and comfortable

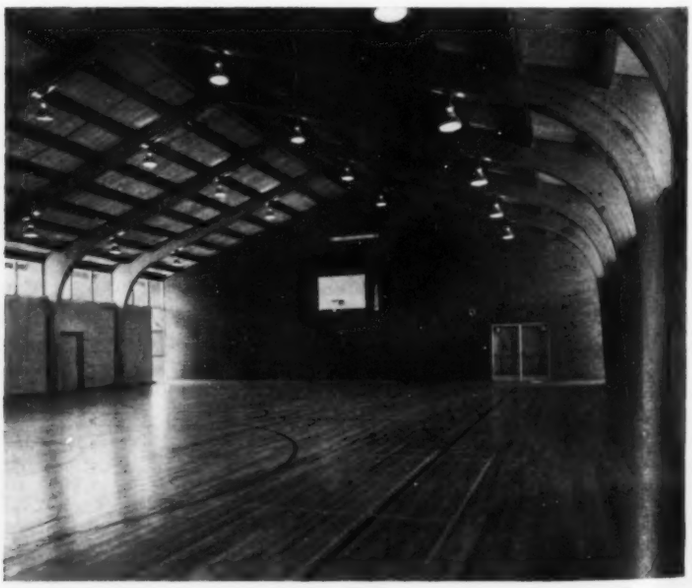


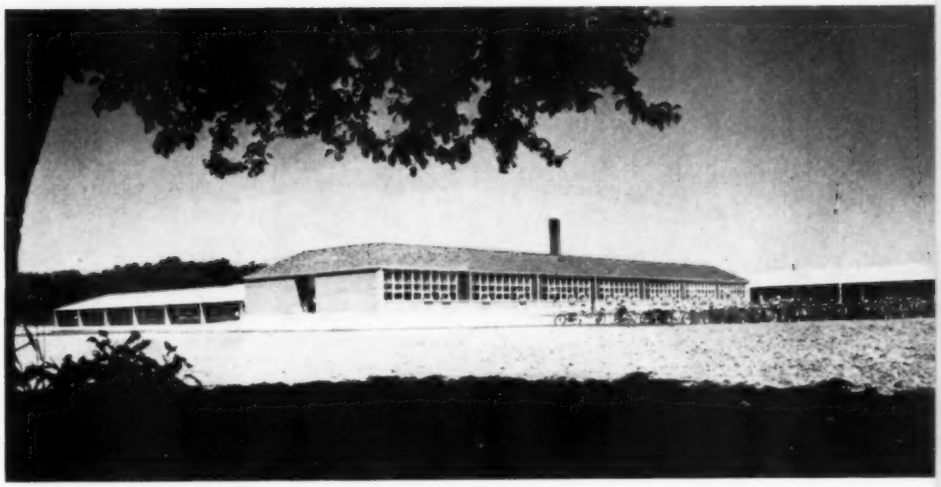


FLOOR PLAN. SOUTH WING.

CONNECTICUT SCHOOL MODERNIZATION

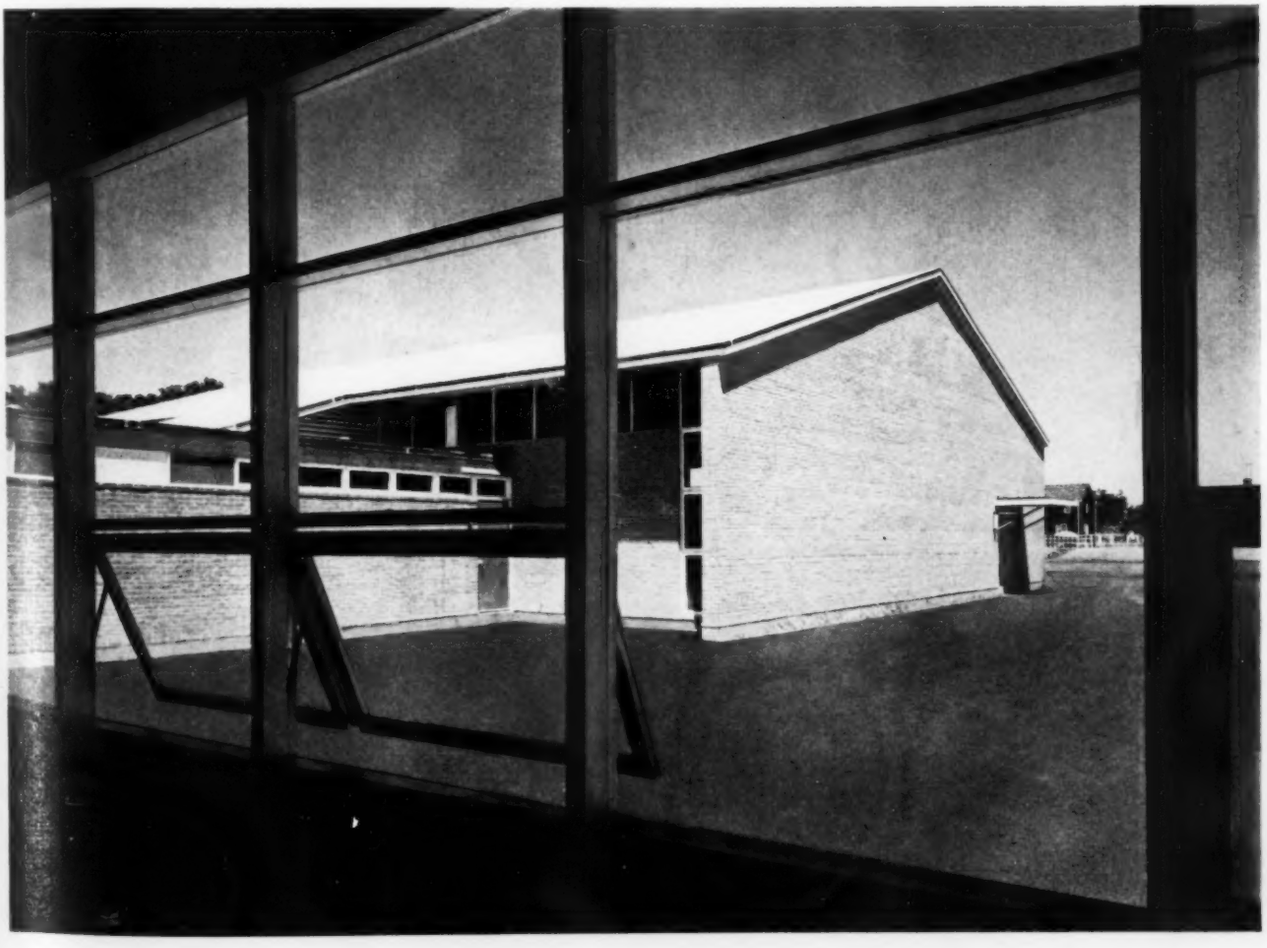






Above, overall view showing relation of existing building to new work. Below, looking from corridor of new south wing toward gymnasium. Old building's walls were brick-veneered, corridors fitted with large glass areas, to harmonize with new

Joseph W. Molitor



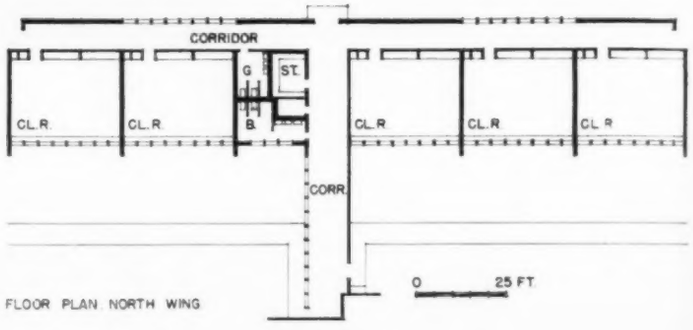




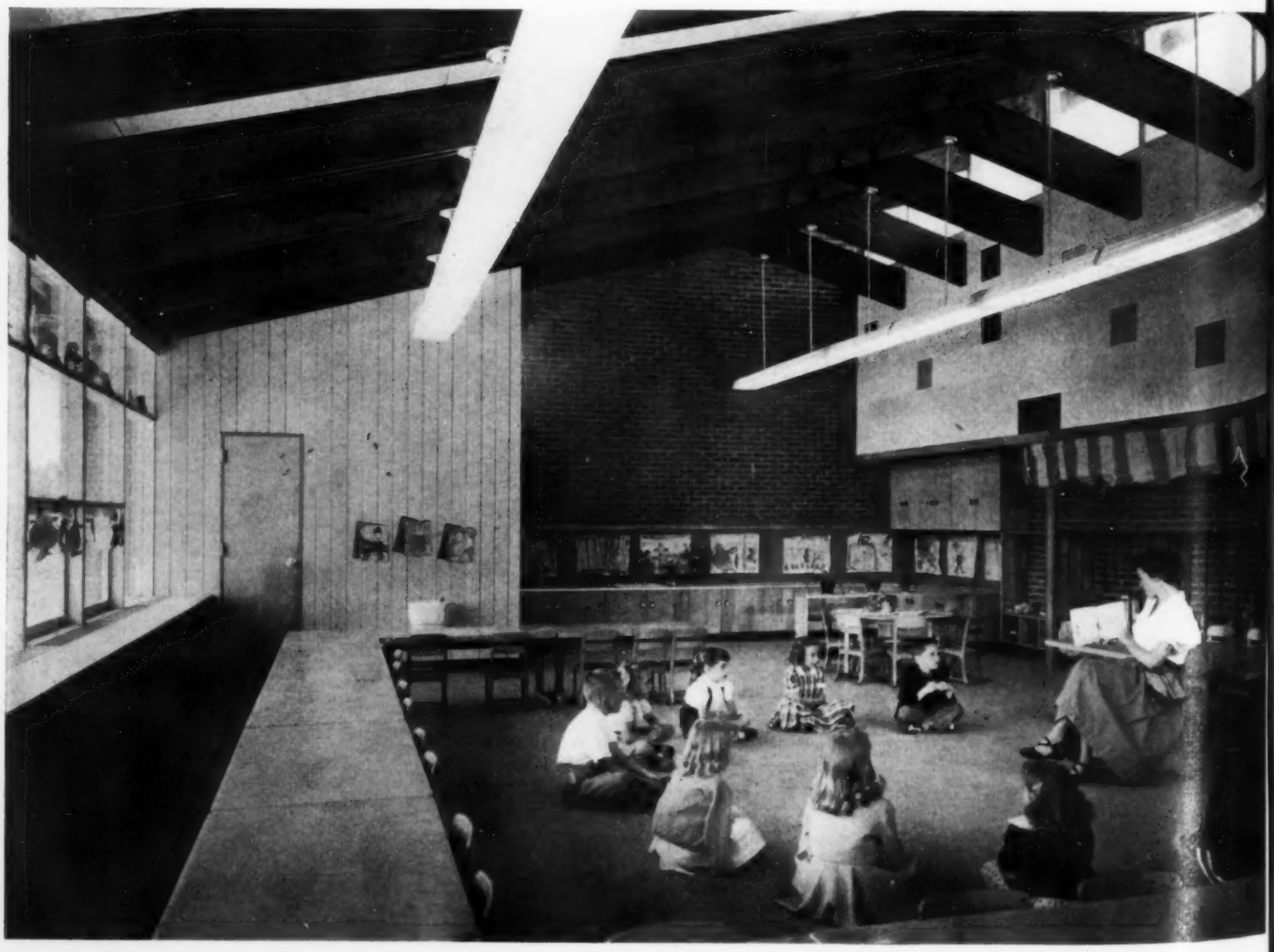
CONNECTICUT SCHOOL MODERNIZATION

Plan at right and photo top left, new North Wing; top right and below, kindergarten in new South Wing. Exposed roof trusses were built of ordinary yard lumber; strong, pleasing color is employed

Joseph W. Molitor



FLOOR PLAN NORTH WING



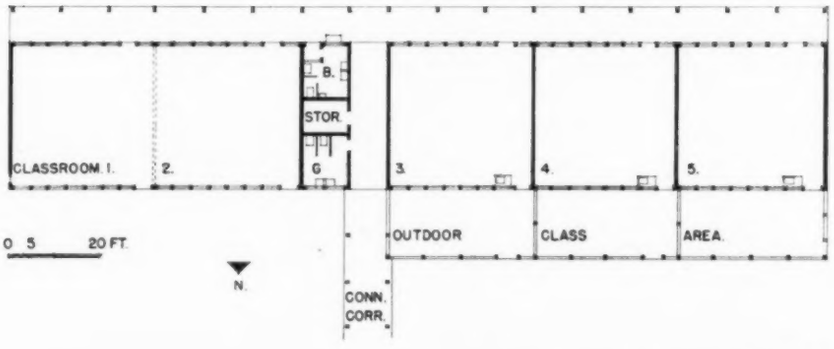
CALIFORNIA SCHOOL ADDITION: $6.84 PER SQ FT

Tularcitos Elementary School, Upper Carmel Valley, California

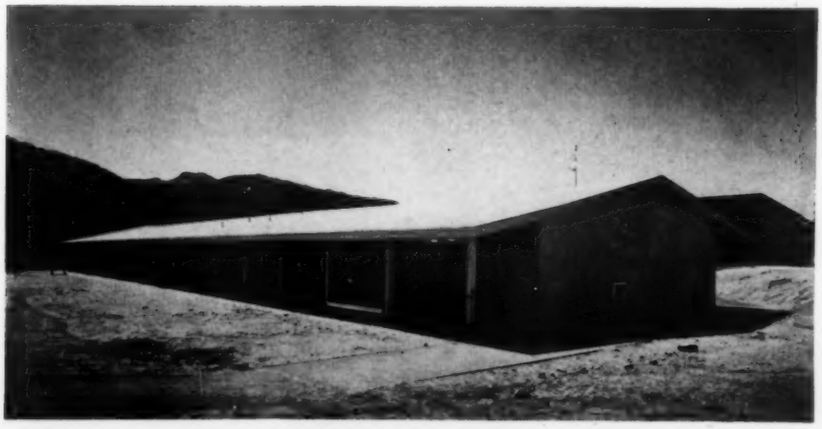
Thomas S. Elston, Architect; Engineers: E. A. Verner, Structural; Millar Clarke, Mechanical

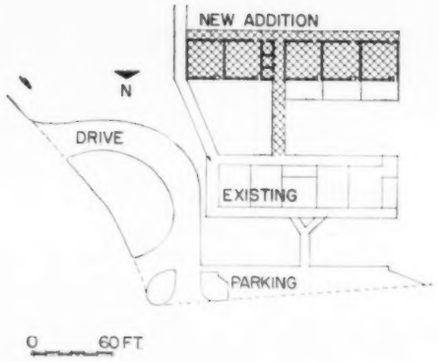
For $44,860 Tularcitos School got five new classrooms and the connecting corridors. Prefab classrooms would probably have cost as much; but the custom-designed job provided more suitable facilities well within the tight budget. The old building's heating plant was adequate; insulated mains connect old and new. While only part of the total cabinet work needed was installed, a complete installation would have raised the total only $2000. The low cost was due in part to five years of study by the architect and engineer on methods of reducing expenses.



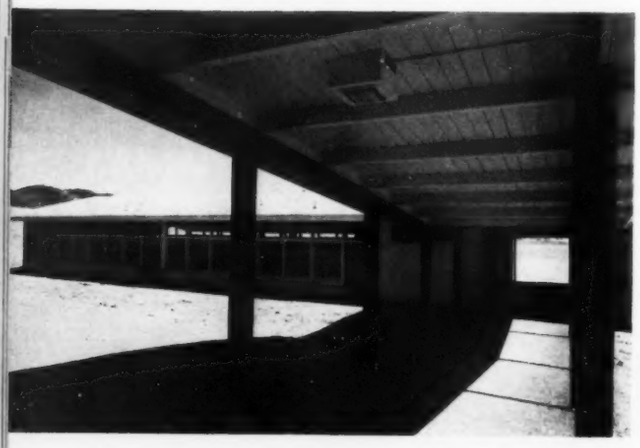


Morley Baer





Morley Baer



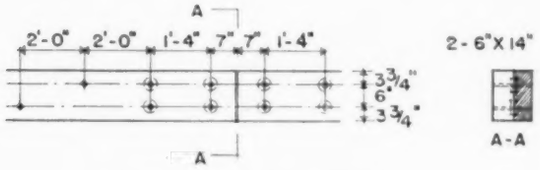
Above, connecting corridor toward new building; below, typical classroom. Only common lumber sizes were used in structure; window mullions are structural



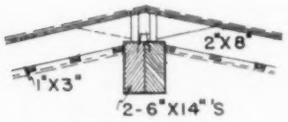
Below, two new classrooms, now joined as multi-purpose room, can be partitioned off. Interior walls, wallboard; ceilings acoustic tile; exterior walls stucco



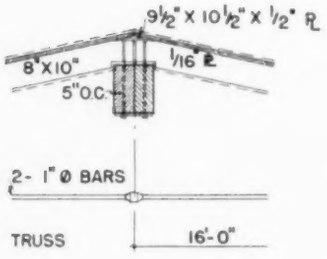
Simple structure, below, uses standard lumber, mostly 2-in., some 4-in. thick, very little heavier material. Almost no steel was required. Economical room section (bottom) was accepted by the Board even though it sacrificed some daylighting. Though whole job was small, work was broken down so separate bids could be taken and work performed on one or more parts while remainder was being planned or checked; construction took 4 months

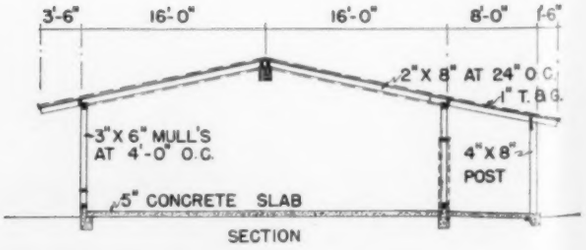


SPLICE FOR SPINAL GIRDER



SPINAL GIRDER





SECTION

MARYLAND SCHOOL: MINIMUM, EXPANDABLE, FLEXIBLE

Hillandale Elementary School, Montgomery County, Md.

McLeod & Ferrara, Architects; C. S. Neer, Associate in Charge

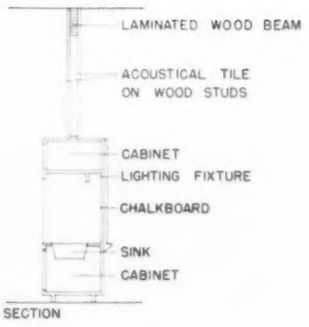
DESIGN of the Hillandale School (J. Gibson Wilson, Structural Engineer) resulted partly from the difficulty of obtaining steel at the time it was built. It is a minimum structure to which a wing can be added. It has cinder block and brick bearing walls and a 2-in. T & G wood roof supported on wood purlins and laminated wood beams. Virtually the only steel is the row of lally columns at the window wall, whose continuity expresses on the exterior the fact that partitions between classrooms are non-bearing and easy to move.

Robert C. Lautman

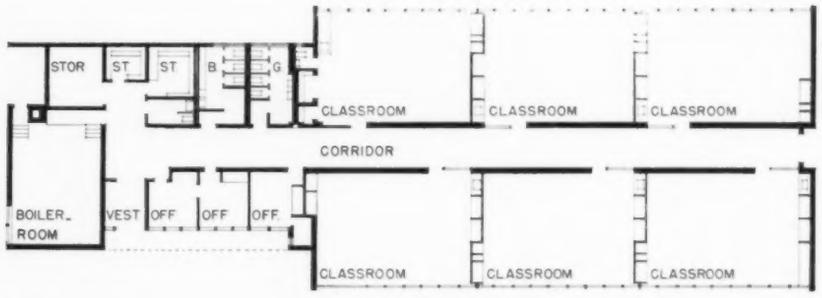


FLEXIBLE MARYLAND SCHOOL

The double-loaded corridor (plan below) has bearing walls of cinder block. Together with lally columns at exterior walls, these support the roof structure independently of classroom partitions. This permits use of partitions composed of plywood storage units (section, below, right, and isometrics on facing page) which were made up as ordinary millwork. This arrangement of class storage facilities expedited and made more convenient the building construction procedures, since a simple shell could be built and the prefabricated "partitions" could be moved in at will. In addition, the compact location of these facilities resulted in more usable classroom space for the cubage than other arrangements the architects had tried, and their flexibility provides an economical answer to possible future variations in space requirements. All these economies were essential in order to stay within the strict budget of $168,000, much of which had to be spent for leveling a rolling site for play fields and public approaches



SECTION

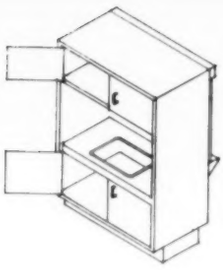


FLOORPLAN

0 25 FT



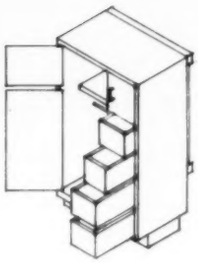
Robert C. Lautman



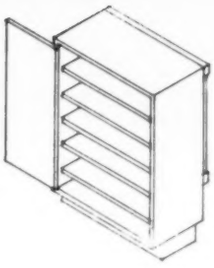
SINK



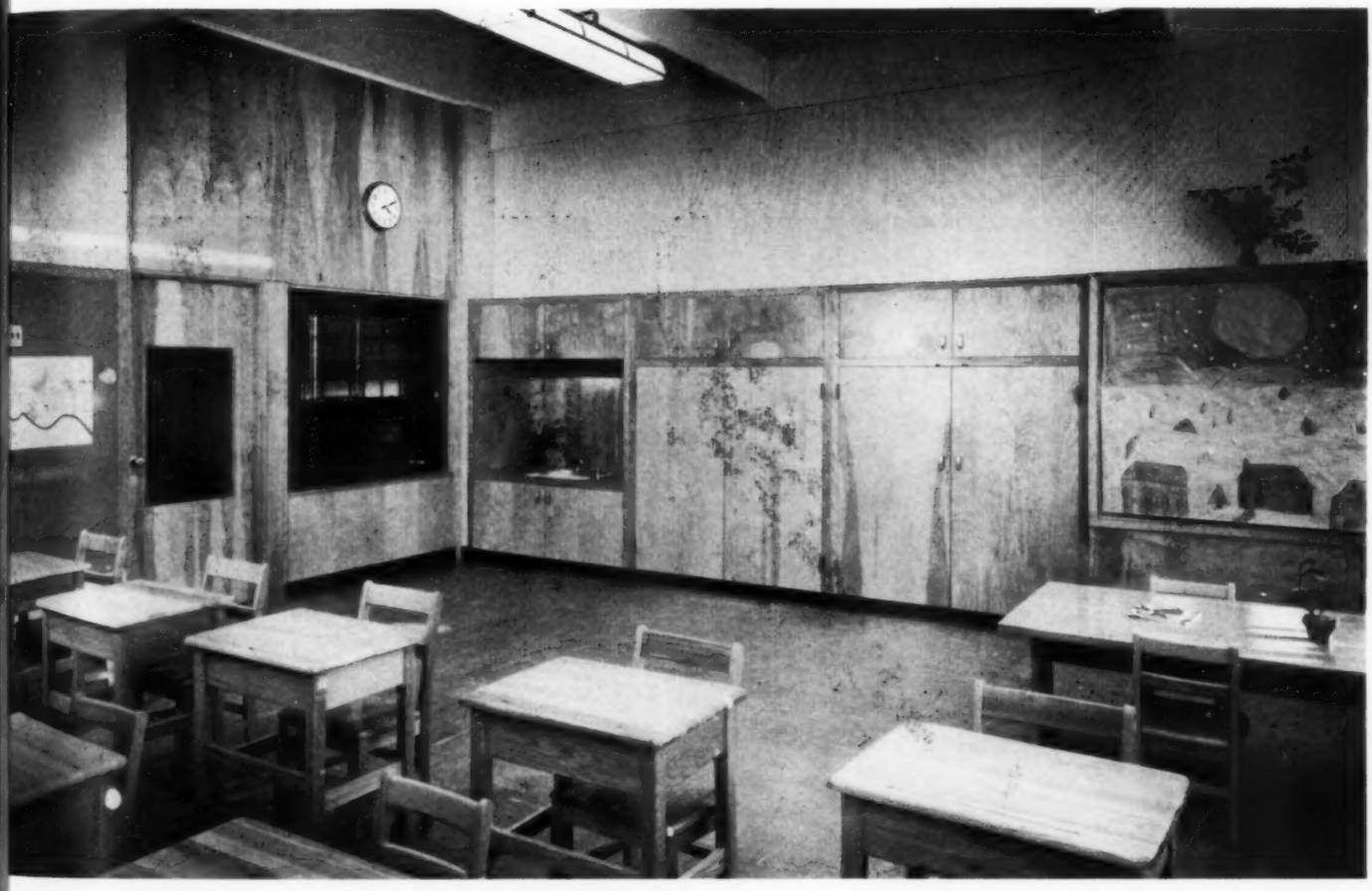
WARDROBE

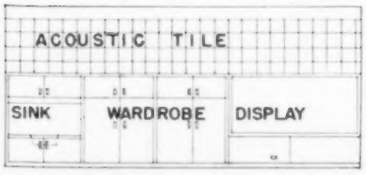


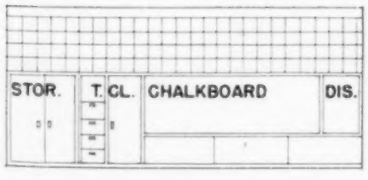
TEACHERS CLOSET



STORAGE







Photos of typical classroom, above and below, and drawings, left, of assembled storage partition, show backs of units supporting chalk boards and tack space for adjoining rooms. Corridor wall has large wire-glazed sash which help light — and relieve monotony of — corridor

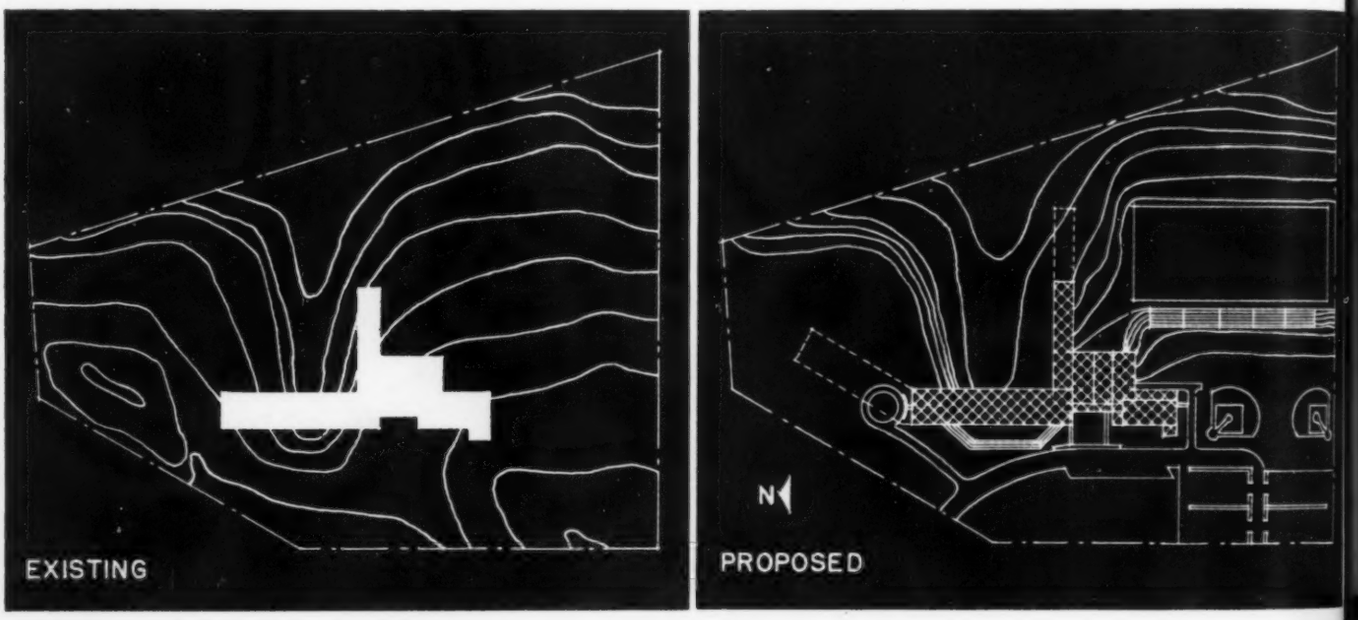


OHIO SCHOOL DESIGN EXPLOITS DIFFICULT SITE

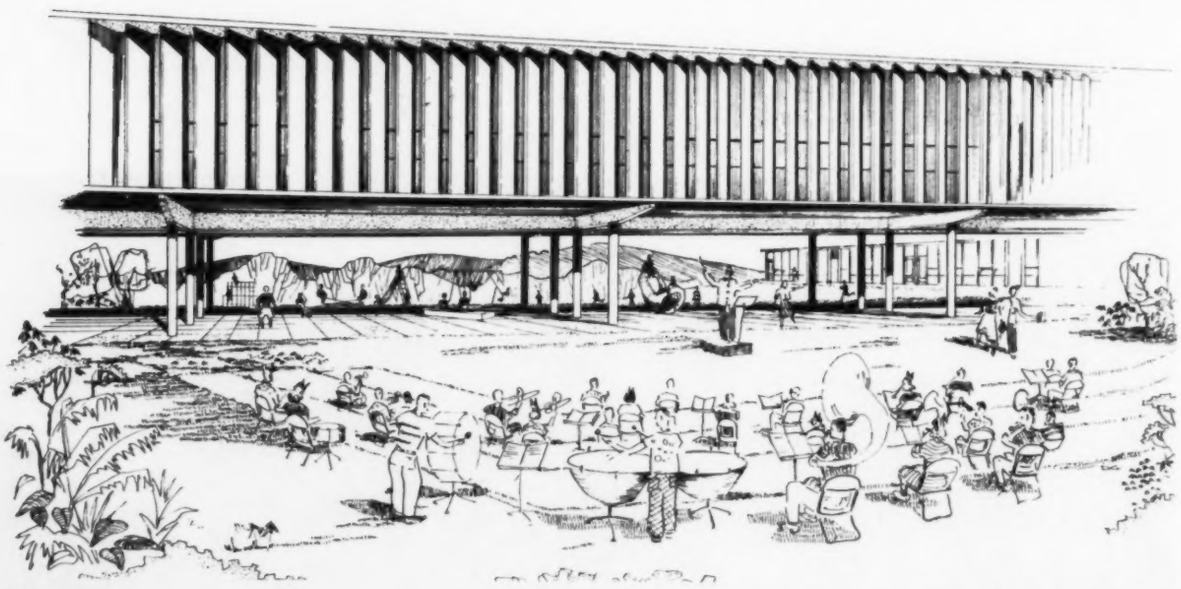
South Elementary-Junior High School, Newark, Ohio

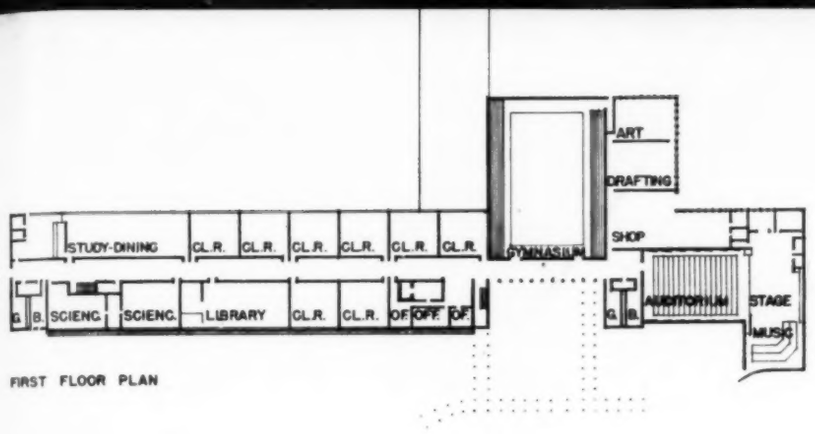
Joseph Baker & Associates, Architects

LATE in 1951, Newark, Ohio, voted a bond issue including $650,000 for this school. Late in 1952, the architects were authorized to proceed and designs were approved. In February, 1953, this scheme won a citation from the *School Executive* for its solution of the problem posed by the site, which had cost the city only $16,000. A short time later the Newark Board of Education rescinded its approval, in fact, decided not to build any school in this location. Area residents protested; now the Board has authorized a $450,000 school (including fees) — a budget so small that a brand new scheme is in work.



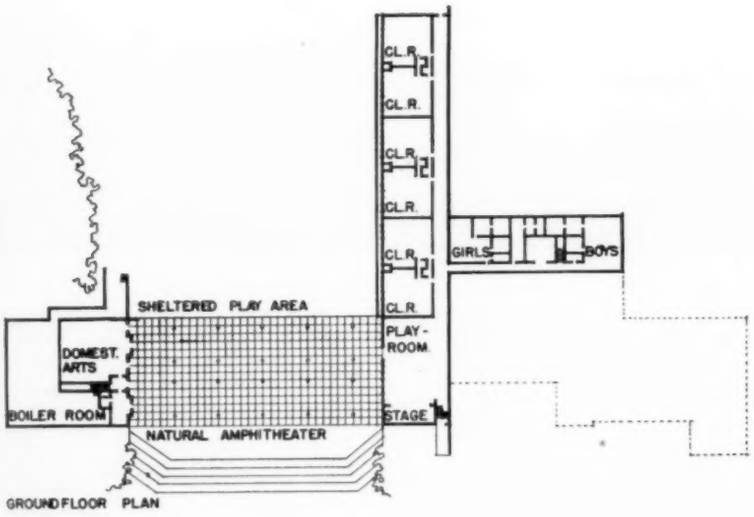
Site plans above and sketch below show how, by merely leveling tops of two knolls and placing one wing across the 30-ft-deep gully like a bridge, sheltered play space and a natural amphitheater could be provided





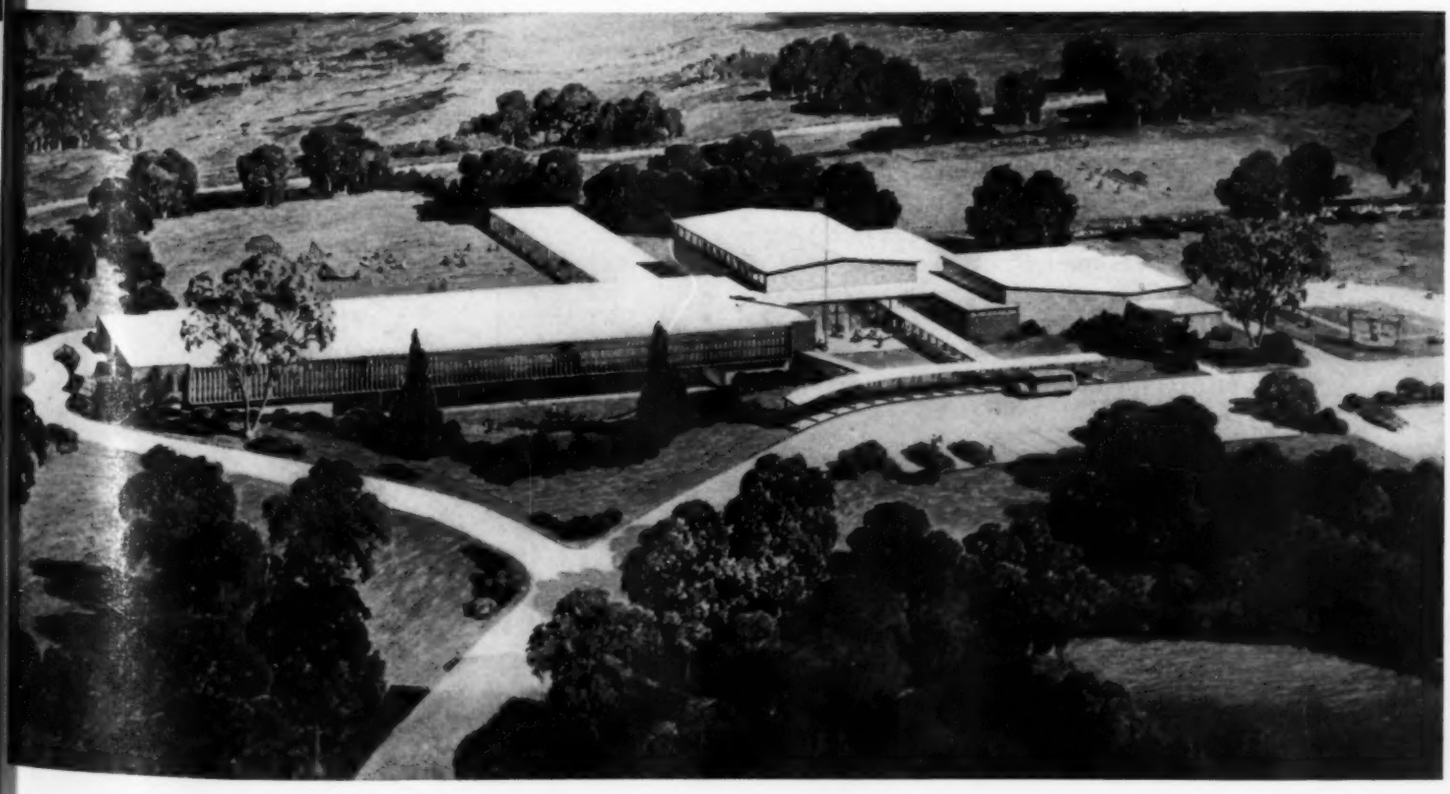
FIRST FLOOR PLAN

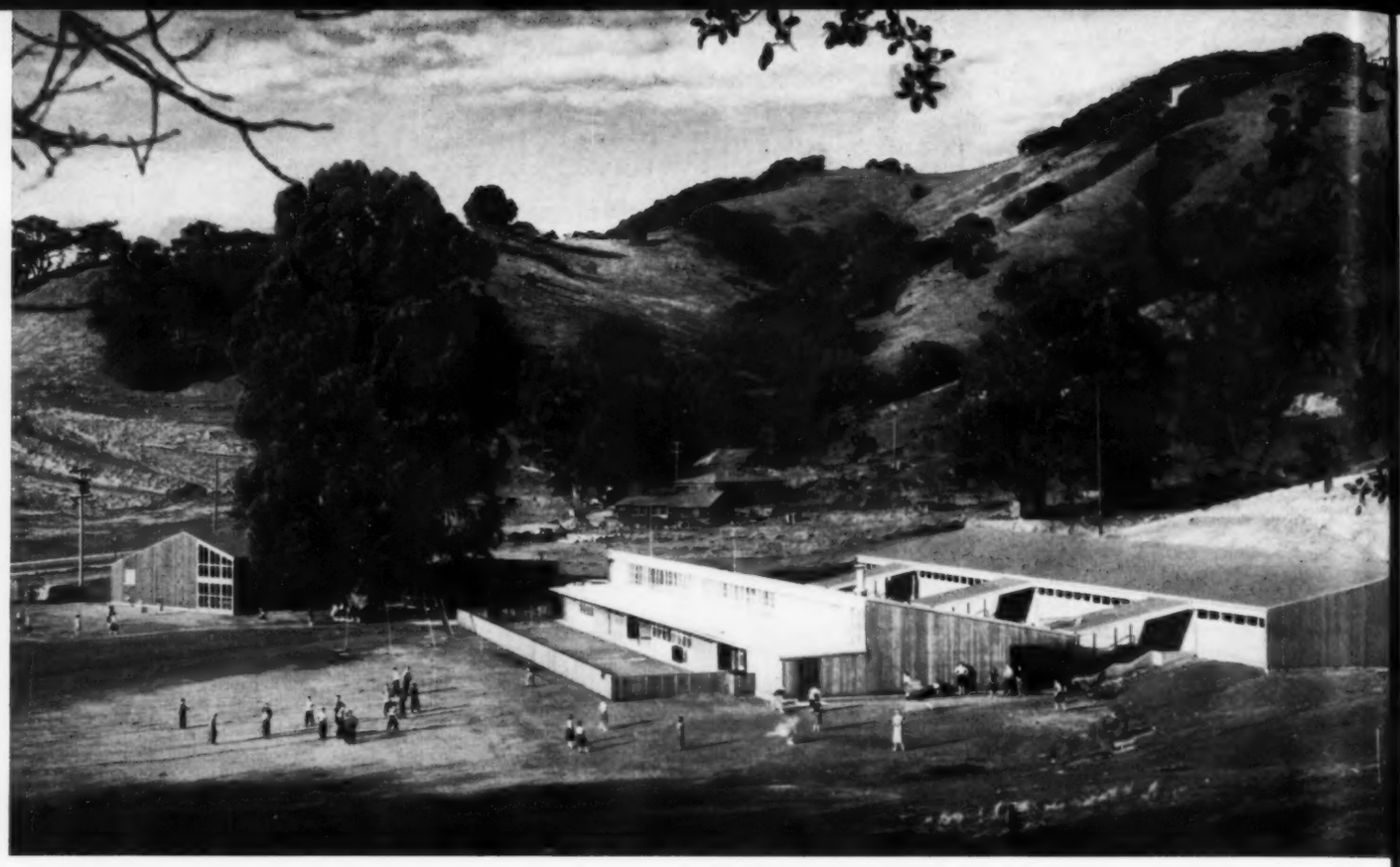
Plans show not only an economical solution to the site problem but also a satisfactory arrangement combining primary, elementary and junior high grades in one building. Upper level wing, placed across gulley, contains junior high. Areas likely to be used by the public are also at this level



GROUND FLOOR PLAN

Wing projecting west at lower level, for primary and elementary grades, divides play area for small children from older children's athletic fields. East face of upper wing, shown on facing page and below, has brise soleils to cut off direct sunlight, admit north light to classrooms

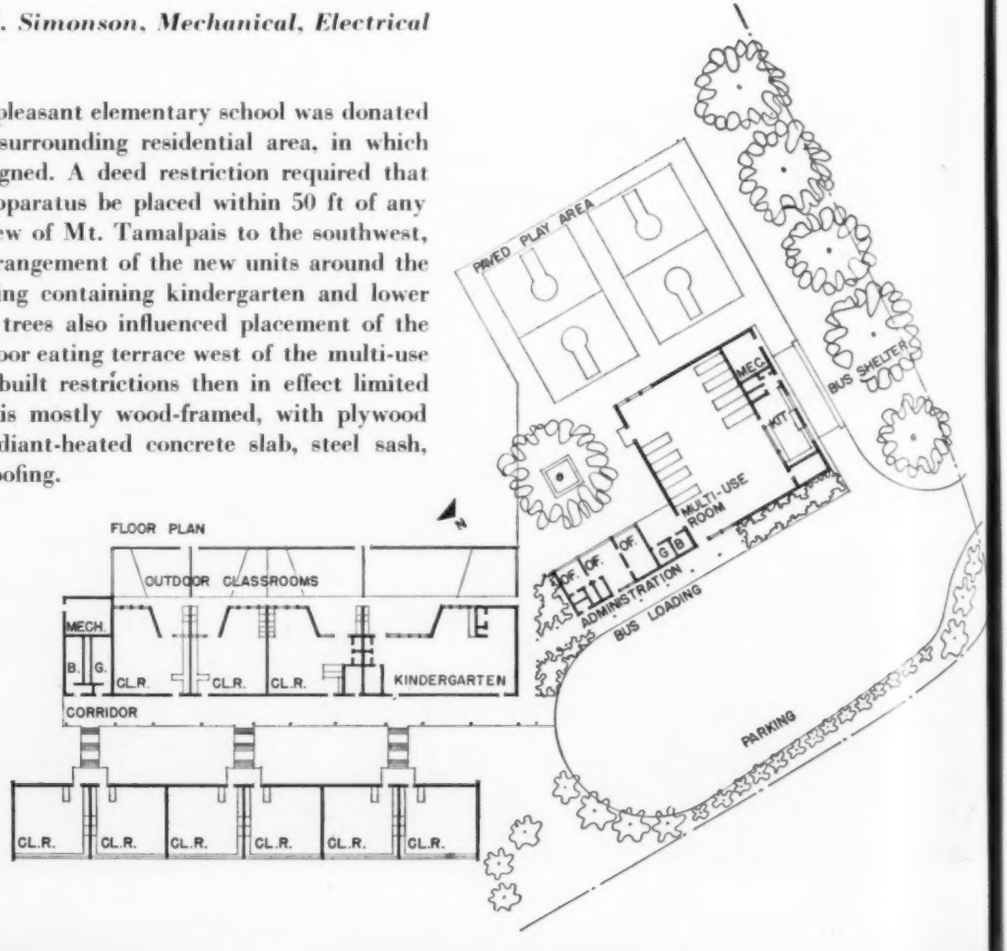




CALIFORNIA SCHOOL GROWS WITH ITS COMMUNITY

Greenbrae Elementary School, Marin County, Calif.
William Corlett, Architect; Peter H. Skaer, Associate
Engineers: Walter Steilberg, Consulting;
G. M. Simonson, Mechanical, Electrical

THE SITE of this extremely pleasant elementary school was donated by the developer of the surrounding residential area, in which the houses are architect-designed. A deed restriction required that no building or playground apparatus be placed within 50 ft of any property line. This, a fine view of Mt. Tamalpais to the southwest, and the contours dictated arrangement of the new units around the existing central classroom wing containing kindergarten and lower grades. Two handsome gum trees also influenced placement of the buildings; one shades an outdoor eating terrace west of the multi-use room. When additions were built restrictions then in effect limited steel to 22 tons; new work is mostly wood-framed, with plywood finishes, acoustic ceilings, radiant-heated concrete slab, steel sash, redwood exteriors, built-up roofing.





Above, kindergarten in existing wing; this unit had roof framed with open-web joists. Center photo shows, left to right, new classroom wing, existing wing built in 1950, administration unit with bus loading in right foreground. Bottom photo, classroom in new wing: framing is mostly wood



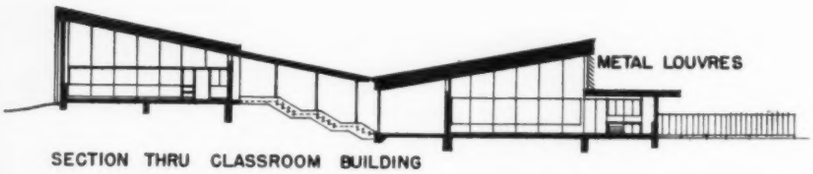
Ernest Braun





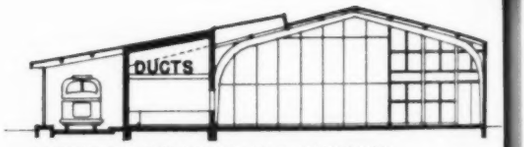
Ernest Brau

Section below: new wing at left, existing at right. Low-ceilinged portion of existing wing provides classroom alcoves and covered play spaces. Ramped corridors have T & G wood roof on lally columns



SECTION THRU CLASSROOM BUILDING

0 5 20 FT.



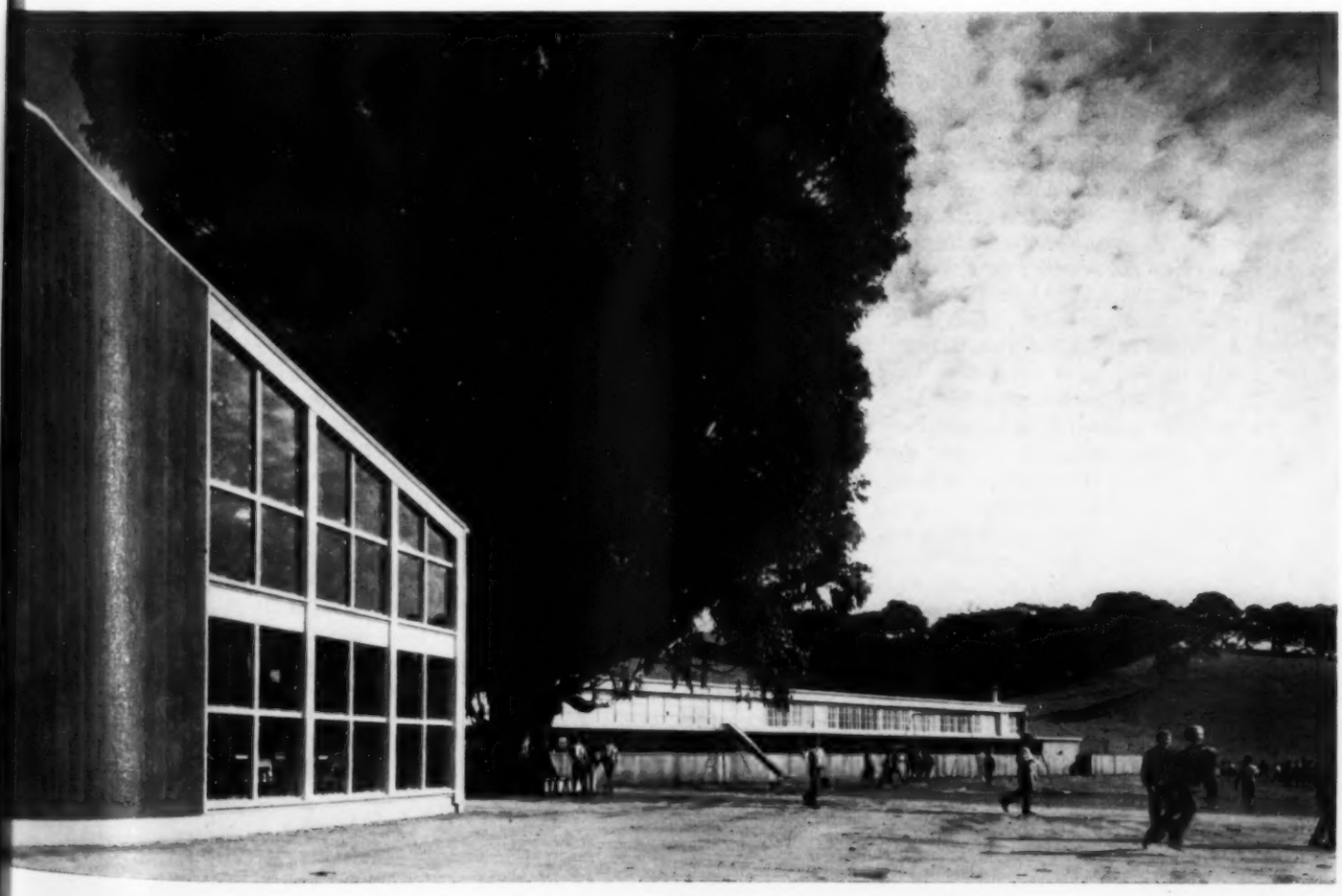
SECTION THRU MULTI-USE BUILDING

Multi-use building (section, photos at right and across-page) has laminated wood arches, slightly more expensive than steel but simple to tie into roof membrane and available at the time





Despite the concrete piling required under the multi-use building, pleasant character and high quality were obtained at a price reasonable for the locality. The additions comprise 12,158 sq ft, new work cost $175,289 or $14.41 pe sq ft, plus $9,566 for site work. Older building cost about $11 per sq ft.





An attractive site was difficult for construction . . .



so houses in Stony Brook Village were designed to follow its contours . .

HOUSING DEVELOPMENT TAILORED TO A

A builder's calculated risk with 50 acres of rocky, hilly land pays off with the aid of some M.I.T. experts

IN MOST CITIES, land that is both well located and economical for the construction of small houses has been developed for some time. The land which remains unused within the boundaries of these cities presents almost formidable obstacles. So Mark Rosenfelt, Boston area builder, faced a knotty problem in looking for a new site for a development of between 200 and 300 houses: whether to take land with desirable topographical features, but located from 10 to 20 miles outside the city, or to find a closer site that would be more difficult to develop.

He finally selected a site bordering on a large public park at the edge of the city. In its favor were good access roads, convenient traveling distance to downtown Boston, and interesting character of the land. But the only reason it was available for a relatively low cost housing development was that the terrain was extremely hilly and rocky. Rosenfelt decided that if construction difficulties of the site could be overcome by proper planning, the houses would be far more marketable than if they were located in the remote outskirts.

CONSULTANTS CALLED IN

For expert help on his problem he went to a number of consultants at Massachusetts Institute of Technology. The coordinator for the group was Professor Albert G. H. Dietz, acting head of the Department of Building Engineering and Construction, who was called in to work out the engineering design for a foundation that would fit any part of the site, and a house structure that would be compatible with the foundation and easily prefabricated.

Professors Allan T. Gifford and Herman J. Shea of the civil engineering department planned the site layout which exploits the natural features of the land. Professor Gyorgy Kepes of the architectural department was color consultant, and Professor A. L. Hesselschwerdt, Jr., of the mechanical engineering department was heating consultant.

Original plans of the house were drawn by the office of Carl Koch and Associates in close collaboration with the builder and the engineer. The first house was built according to these plans without change, but subsequent evolution of the foundations and the decision to prefabricate the house in the nearby shops of the E. F. Hodgson Company brought about rather extensive changes in windows, entrances, and other details. However, the basic plan is essentially unchanged. The project will have some 200 houses and their design is briefly described below.

LAND UTILIZED

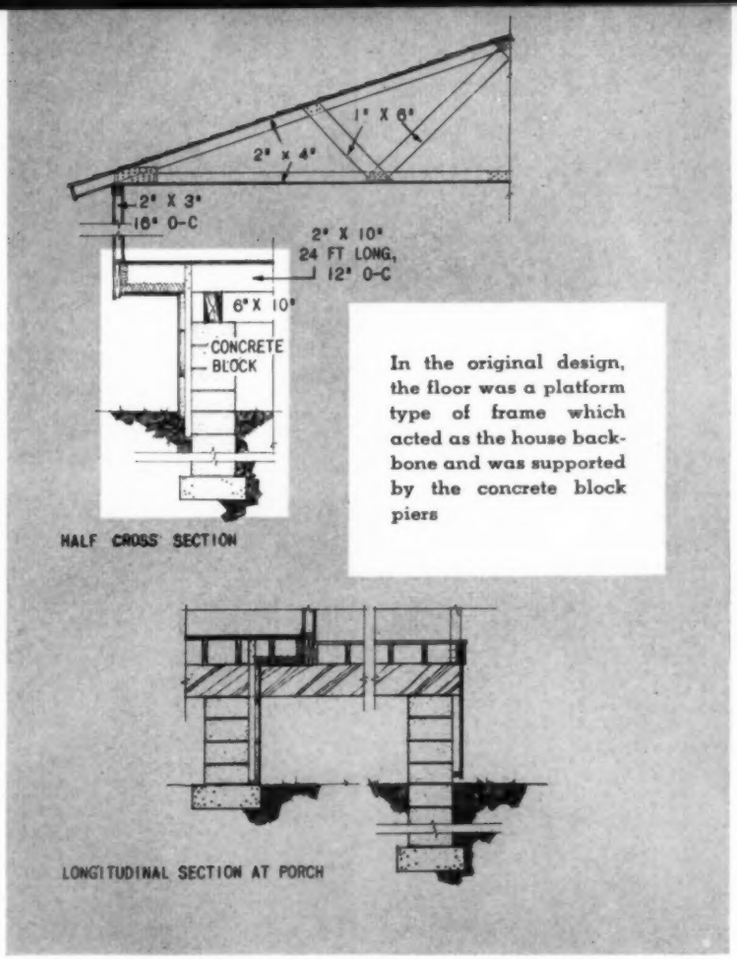
It was necessary, first of all, that the house be adaptable to any terrain — that is, hillside, swamp, and deep fill conditions — as well as to level land. One of the simplest systems devised to accomplish this employed two rows of concrete block piers for the foundation, supporting a platform type of frame for the floor and making the floor and walls independent units (see sectional drawings p. 203). The foundation was later modified, as described in "Engineering Design" on p. 204, to meet consumer preference for a basement and to overcome objections from financing institutions.

To keep costs down, semi-stressed-



by being perched on concrete block piers

TO A ROUGH SITE



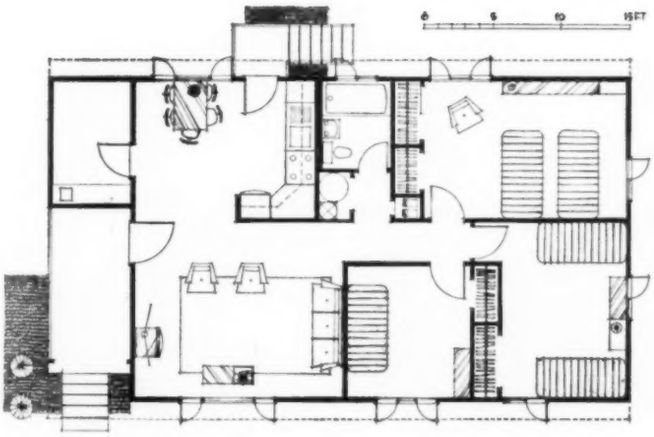
In the original design, the floor was a platform type of frame which acted as the house backbone and was supported by the concrete block piers

skin wall panels and the roof trusses are prefabricated in the shop and erected in the field.

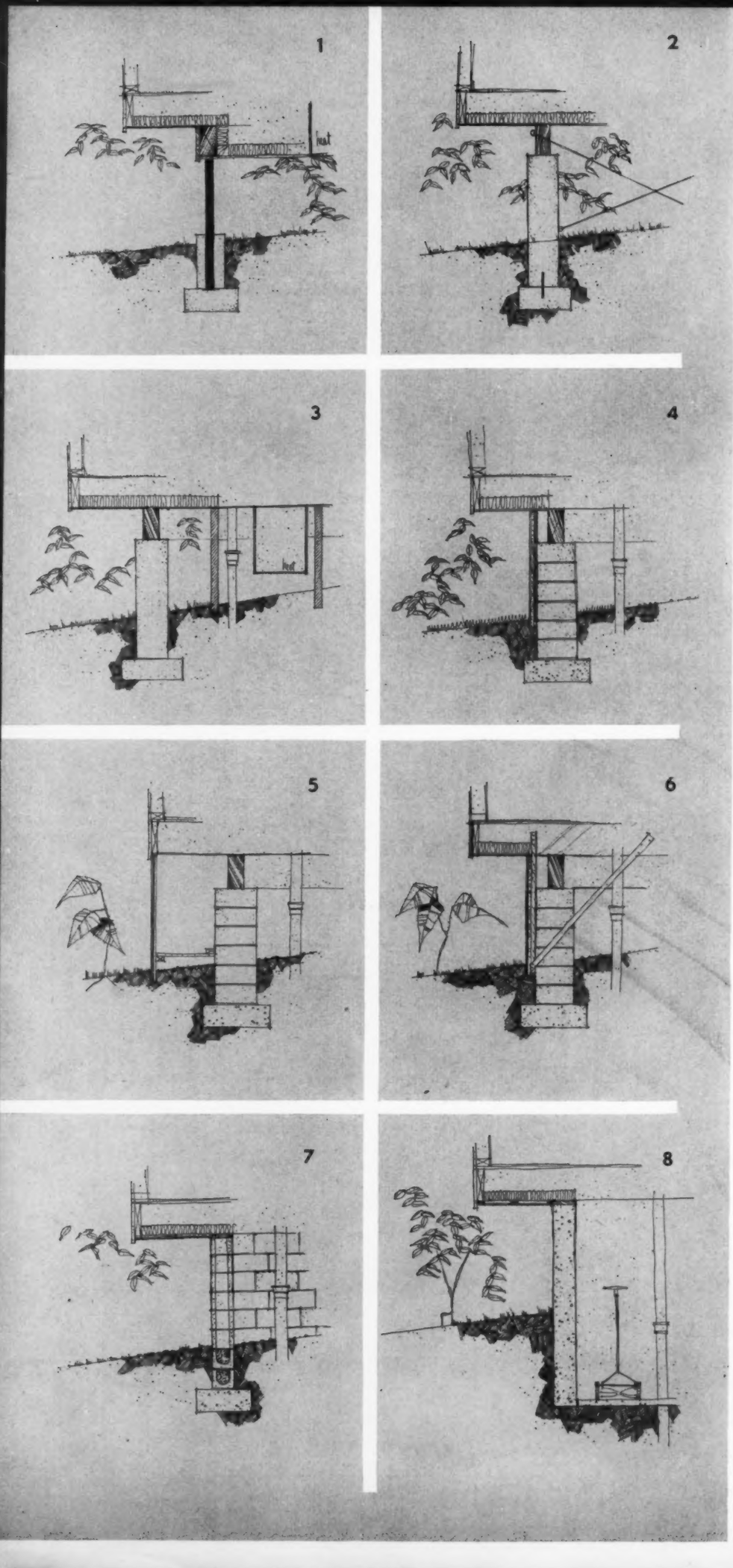
The site development was conditioned by the fundamental character of the land. This is indicated by the fact that there is as much as 100 ft difference in elevation in a 2000-ft interval, plus numerous outcroppings of ledge scattered around.

It was decided to keep the public roads to a minimum since they would be much more expensive to build than in the usual subdivision. From this objective there developed the concept of private walkways projecting from the public roads and designed to serve small clusters of houses (see site plan p. 205). Boston's street department raised objections to the use of walkways, so present plans are to have short secondary streets in their place, providing access to vehicular traffic and making it possible to build driveways for parking next to the houses. This, of course, reduces the total number of houses.

Wherever possible, the primary streets were laid out in the valleys, leaving the







◀ FOUNDATION DESIGNS

1. Pipe columns encased in protective concrete.
2. Poured or precast concrete cylinders.
3. Variant of scheme No. 2 has an insulated utility core.
4. Concrete block piers with asbestos-cement and fiber-board skirt.
5. Concrete block piers and lightweight concrete plank skirt at piers.
6. Concrete block piers and lightweight concrete plank skirt at periphery.
7. Concrete block wall supported by reinforced block lintel for grade beam.
8. Full or partial basement.

SITE PLANNING ▶

The developing engineers believed in adapting the engineering necessities to the raw site, avoiding, wherever possible, a wholesale reworking of the area in favor of engineering utilities.

They were faced with a topography that is extremely rugged — a series of scattered steep knolls with considerable ledge outcroppings (closely spaced dots on drawing). As if this were not enough, the presence of four large swamps (widely spaced dots) added to the difficulties.

Here is an instance where an accurately executed topographic map served its full purpose — representing on table top that which is on the ground.

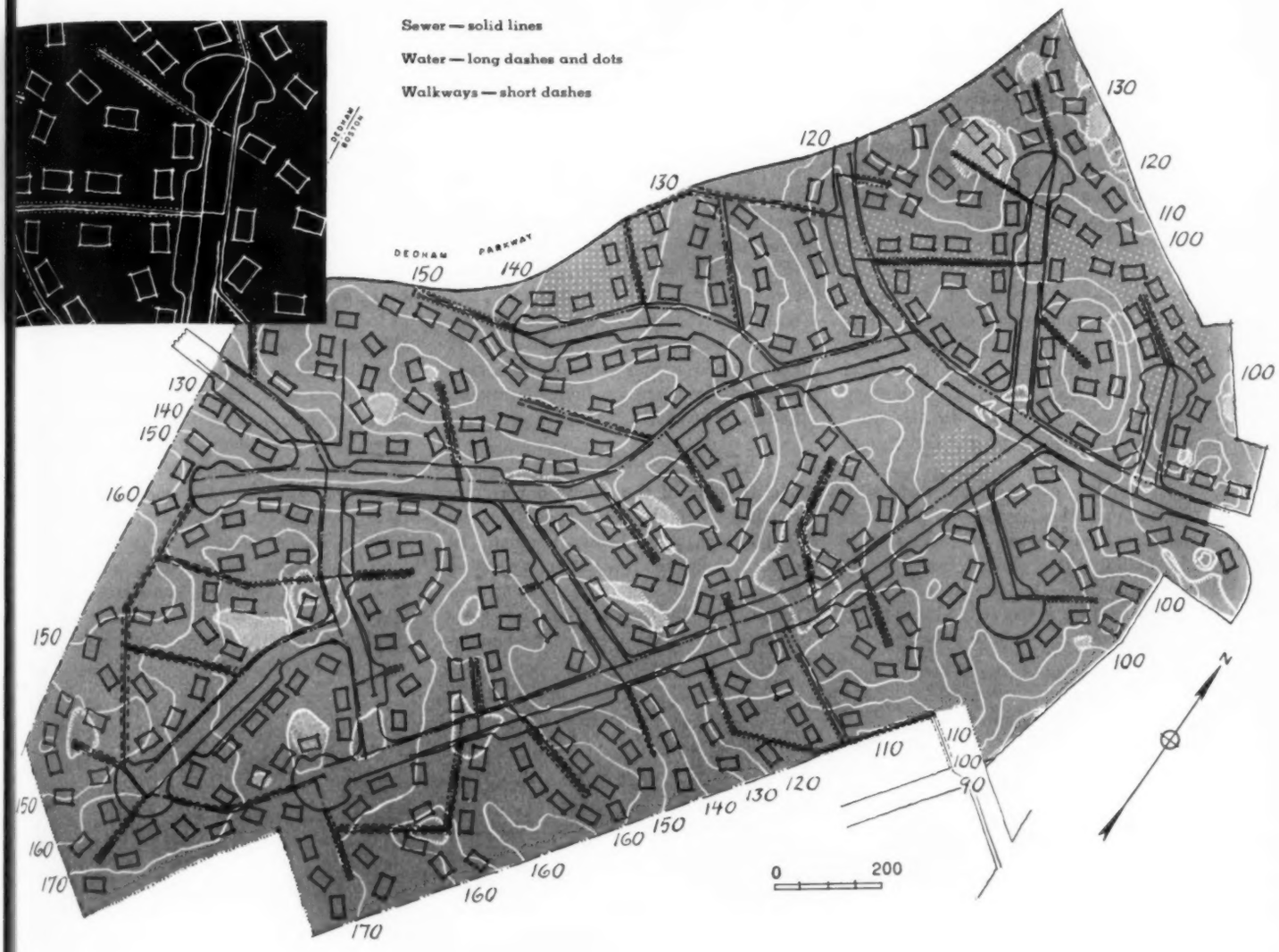
The detailed planning of the road system, walkways and utilities was done on the topographic map with simultaneous planning of the house locations. Walkways have since been transformed into secondary roads for vehicular traffic. Consequently, the total of houses to be built is nearer to 200 than 300.

houses to be erected on the hillsides. The private walkways pretty much followed the contours of the land, with houses grouped around them informally. This arrangement, in combination with the differences in elevation and the use of color, furnishes a great deal of variety.

This housing development, according to the builder, is designed to serve an intermediate market for dwellings between apartments and full-fledged suburban houses.

ENGINEERING DESIGN: 1. FOUNDATION

To a large extent, the nature of the terrain dictated the engineering design of the projected houses. It was decided that it would be necessary to minimize the excavation, to make the foundations as simple as possible, and to employ the floor as a working platform as well as the real backbone of the house. Floor and foundation design went hand in hand



through a series of evolutions dictated both by the terrain and by public reaction to the somewhat novel (though by no means revolutionary) ideas advanced.

At first it was decided that traditional foundation walls and basements could not be used in many parts of the area because of the expense of excavation. As sketched in Fig 1 on page 204, a simple footing, post, and beam construction was first worked out. This consisted of pipe columns embedded in concrete footings and supporting floor beams above. The floor consisted of joists resting on two long beams and cantilevered at each end. The heating system was suspended from the floor, and the entire underside of the floor and heater space was heavily insulated; otherwise the area under the house was left open.

Because of the necessity for protective concrete around the steel column below grade, a second scheme, Fig 2, was developed, consisting of concrete cylinders extending from footing to beam. These were either to be cast in place and tied to the footings with reinforcing steel, or precast and set on the footings. In the latter instance, sway bracing would be required with any tall piers, to prevent overturning due to sidewise wind pressure on the house.

A variant of the foregoing schemes included a cylindrical shell, Fig 3, extending from the house floor to the ground. In this shell, the utility lines and the heater were to be grouped to provide a warm utility core. This was to prevent freezing in winter and would provide more space for the heater. Otherwise, as before, the space under the house would be open.

When the first house was erected, the reaction of the public and of financing institutions to a house on piers, and projecting out over them, was so extreme and so adverse that the developer decided to provide a skirt of some kind to close off the area under the house. The skirt, if properly built, would at the same time insulate this space. Several schemes were developed and tried. In each instance the skirt was suspended from the floor frame above.

The first consisted of $\frac{3}{8}$-in.-thick cement-asbestos board backed with $\frac{3}{4}$-in. asphalt-impregnated fiber board, all supported on a framework of pressure-creosoted 2-by-3's as sketched in Fig 4. An alternative scheme employed 2-in.-thick lightweight concrete planks in place of the cement-asbestos board and fiber board.

Either of these skirts could be suspended from the floor at the periphery of the house or at the line of the piers, Figs 5 and 6. The latter permitted the skirt and piers to be closely tied together and provided greater strength, anchorage, and resistance to overturning by wind pressure.

Still another evaluation of the foundation problem resulted in the scheme shown in Fig 7. Piers extend from the footings to grade. In one variant of the scheme, sectional forms are erected above grade, reinforcing bars are run from pier to pier, and an 8-in. concrete wall is poured to the underside of the floor. In effect, the wall is a continuous grade beam supporting the house and closing off the area under it. In the other variant of this scheme, the wall is concrete block, with standard reinforced clock-lintel construction extending from pier to pier to act as a grade beam supporting the wall above. In either event, the wooden floor beams are eliminated and the floor joists rest directly on a wooden sill atop the poured concrete or block wall.

Even this construction met with strong opposition because of the decided preference for basements on the part of the public and of lending institutions. Consequently, the grade-beam construction of Fig 7 was still further modified, as shown in Fig 8, to provide either full-depth foundation walls and basement floor wherever the terrain will permit, or partial basements where these are practicable. The final construction, therefore, will be an adaptation of that shown in Figs 7 and 8.

The evolution of the foundation and skirt design illustrates the decided effect that public reaction can have upon a house design which, although different from usual practice, is hardly revolutionary. The original concept of a house supported on exposed columns or piers had to be abandoned; a skirt, approximating more conventional construction, also proved unacceptable, and a concrete grade beam or foundation wall had to be provided.

2. FLOOR FRAMING

The framing of the floor was carefully considered at the same time that the foundations were being designed. In order to keep the foundations as simple as possible and to minimize the sizes of members in the floor system, it was decided to recess the piers or the foundation walls from the outside edges of the houses and to allow the house to project at the sides. The floor joists, therefore, were designed as one-piece members, spanning from side to side and resting on long beams supported by the piers, or resting on wood sills supported by the foundation walls and cantilevered 3 ft at each end.

Wind loads and snow loads as well as live and dead loads were carefully considered as required under the Boston Code, and all the possible combinations of loads were investigated to determine the sizes of joists and beams required. The final decision was to employ 2-by-10-in. joists, spaced 12 in. on centers and 24 ft long, spanning the full width of the house. The two beams, in turn, would be 6-by-10 in., spanning from pier to pier. The floor thus became a simple rigid platform consisting of continuous 24-ft joists resting upon beams or foundation walls. Two-by-10-in. headers at the ends of the joists completed the framing, in addition to the line of bridging down the center. This was a



platform type of frame which is not covered by the Boston City Code. Consequently, it was discussed with the Boston City officials and an agreement that it could be employed was reached.

Since this was an engineering design of what is customarily built by rule of thumb, decisions had to be made concerning allowable fiber stresses in the common grades of lumber most economical for this purpose. The 6-by-10-in. beams were designed as Number One Common with allowable bending stresses of 1450 psi, and the 2-by-10-in. joists as Number Two Common with allowable fiber stresses of 1200 psi.

In practice, the floor joists are carefully laid out and a cutting schedule made for the 4-by-8-ft plywood subflooring, so that a minimum of cutting is required. As it finally turned out, no waste at all was encountered with the three-bedroom house, and only one 4-by-4-ft piece of plywood was left over with the two-bedroom house. This piece, of course, could be used on the next house. A single cut through the middle of the 4-by-8-ft sheet is the most that is ever required. In order to insure a level floor, the 2-by-10-in. joists are edge-trimmed at the mill to a uniform width. They are also all cut at the mill to a uniform length, so that with two headers they are 24 ft long plus or minus $\frac{1}{16}$ in.

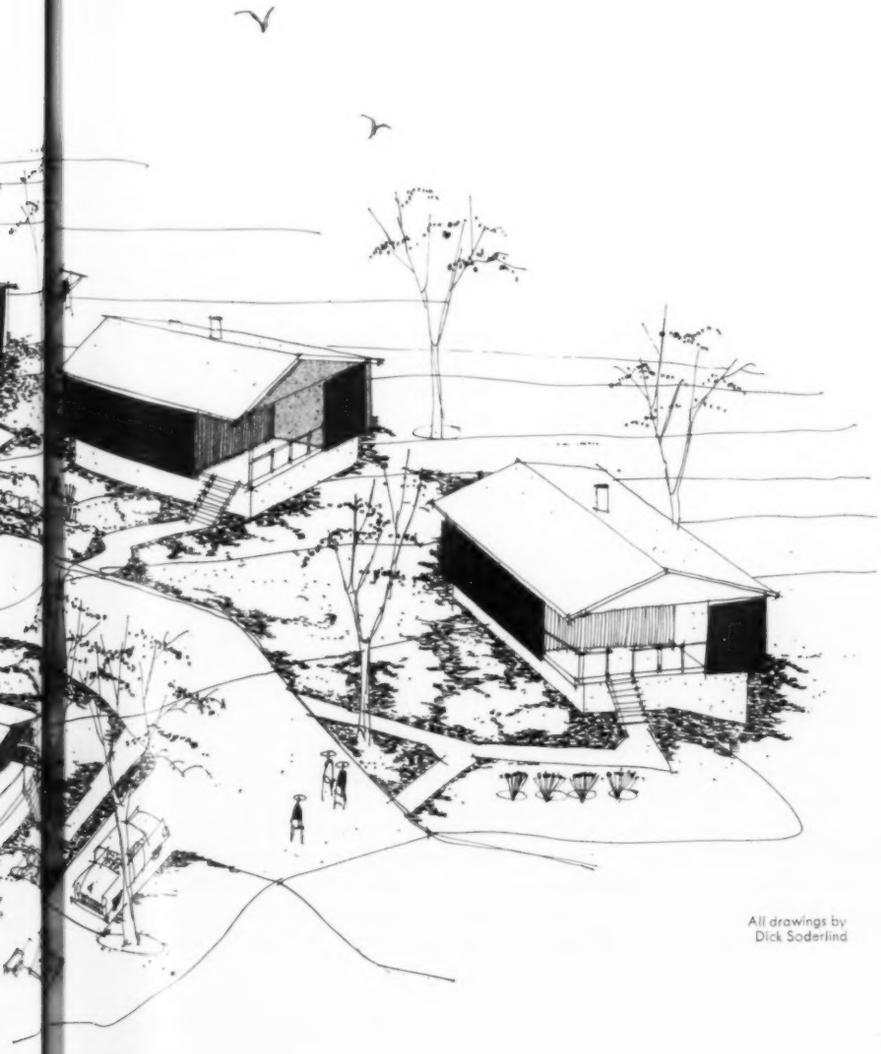
3. WALL FRAMING

Like the floor, the wall framing turned out to be nonstandard, according to the usual construction practice in the New England area as exemplified by the Boston Building Code. Because these buildings are only one story high, it was found that 2-by-3-in. studs could be employed instead of the 2-by-4-in. studs commonly specified. Although the studs could be 20 in. on centers, it turned out to be more feasible to place them 16 in. on centers, so they would conform to the 4-ft widths of standard plywood.

The Boston Code generally requires corner braces, but it was agreed that with the rigid plywood skin it would not be necessary to employ corner braces, girts, or the other standard construction usually found in the northeastern area. The framing of the walls, therefore, consisted simply of 2-by-3-in. studs 16 in. on centers with a 2-by-3-in. shoe and double or triple 2-by-3-in. plate at the top to carry the roof.

The outside consisted of waterproof $\frac{3}{8}$-in. striated plywood nailed to the studs. The inside finish was $\frac{1}{2}$-in.-thick gypsum board with an aluminum facing placed toward the stud space. This arrangement provided satisfactory insulation, having a "U" value of 0.15 Btu. Because the plywood plus gypsum board construction proved to be very tight, small breathing holes were bored through the sole and the plate to allow for equalization of air pressure with changing temperatures, and for ventilation if any vapor should penetrate into this space.

Wall panels are fabricated by the E. F. Hodgson Company, Dover, Mass., in their shop. They are carried as complete wall length units to the site for erection by the field crew. With the precision



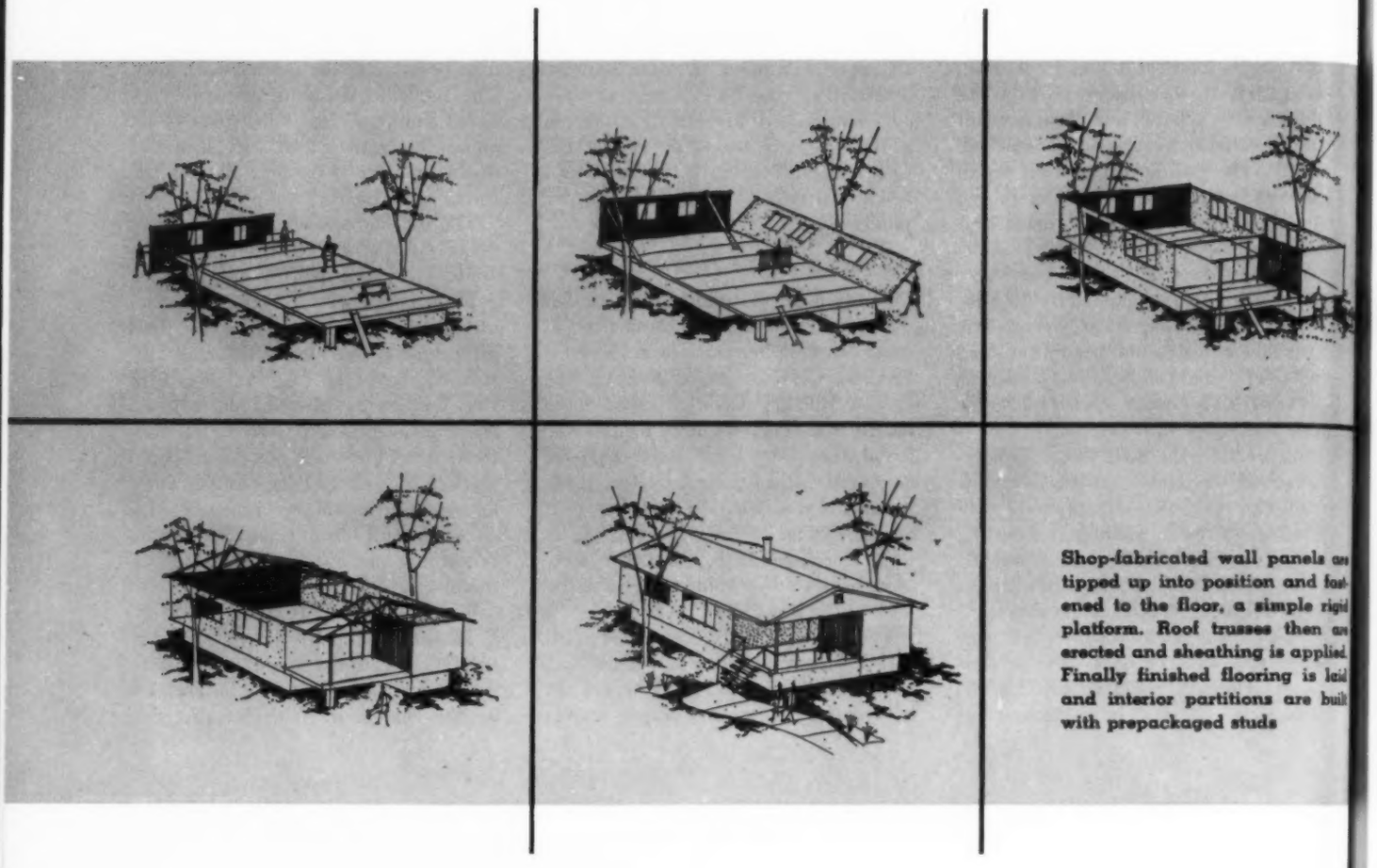
All drawings by Dick Soderlind

COLOR PLANNING

Early in the planning, it was decided that color could either add greatly to the entire development or could detract from its unity and the general arrangement of the houses dictated by the terrain. The street layout and the locations of the houses on the individual sites all conform to the contours and the other natural features of the terrain, making for an unmonotonous general plan.

It was felt that this desirable feature could be accented by a color scheme in which a considerable range of colors would be employed over the entire development, lending it a pleasing variation which would serve to emphasize the nonregular arrangement of streets and houses. At the same time it was thought that the change of color from one house to the next should be slight, to avoid abruptness in the variations. A scheme was finally developed in which a gradual change would take place from house to house and from one group of houses to the next, while at the same time permitting a large range of colors to be employed throughout.

Original colors included shades of violet to pink, orange to brown, dark to light gray, and light to bright yellow, but actual colors used will depend mainly on what is available for exterior wood. The color in the drawing indicates only the gradual shading concept.



Shop-fabricated wall panels are tipped up into position and fastened to the floor, a simple rigid platform. Roof trusses then are erected and sheathing is applied. Finally finished flooring is laid and interior partitions are built with prepackaged studs

cutting of the floor joists and careful squaring up of the floor frame so it will not be more than 1/16 in. out of length or square, it has been found that the prefabricated panels fit without difficulty and can be erected in a very short time. In practice, the house is erected and roof shingles are applied all in one day.

4. ROOF TRUSSES

It was decided to use full-span roof trusses to avoid the need of interior bearing partitions. Various truss designs were carried out, including timber connectors, bolts, and nailed trusses. The timber connector trusses were found to go together very quickly in the field or the shop, but because of his shop conditions, the prefabricator finally decided to use nailed trusses. Loading tests of 75 lb per sq ft were made for both the connector design and the nailed design. Both were found to be completely adequate, with small residual deflections after the load had been removed subsequent to being in place for 24 hours.

The finished flooring, finally selected after several trials of different types of floor covering, was standard end-matched edge-grain Douglas fir 13/16-in. flooring. When the wall panels are up and the roof closed in, the finish flooring is laid directly over the entire floor before any interior partitions are placed. This allows rapid laying of the floor and also makes it possible for unskilled labor to lay the floor rapidly, using a nailing jig. After the flooring is in place, the prepackaged studs for the interior partitions are rapidly assembled and erected ready for the gypsum board finish.

5. HEATING

The heating system consists of a forced warm air circulating system placed in the basement or suspended from the framework below the house. By running the heating ducts through the area under the house and up through the joist system into the floor registers, and by carrying a large central return back to the heating system, complete forced air circulation is assured.

6. CONCLUSION

The construction is rapid and simple. The platform floor becomes the backbone of the house and makes construction largely independent of the rough terrain. A series of more-or-less independent planes is established, making for great flexibility in scheduling construction. Piers or foundations are one operation. Floor platform is another operation. Erection of walls and roof trusses is one rapid operation, and application of roof sheathing is also rapid. In a day's time, the house is completely closed in.

Shrinkage of the beams and joists is uniform and causes no differential settlement to bring about racking and distortion of the house. Otherwise, there is little cause for shrinkage settlement to occur.

The builder has found the construction to be the fastest, simplest, and most "buildable" in his experience. The evolution of the house at all stages was discussed with the Boston Building Commissioner, Mr. Harry Keefe, who, while insisting on good engineering and construction, took a sympathetic and cooperative attitude which made many of the construction features possible, while at the same time conforming with the intent of the Boston Building Code.

WATER VAPOR CAN DAMAGE BUILT-UP ROOFS

Part 2 | *Roof Construction Principles and Suggestions*

By C. E. Lund
Professor of Mechanical Engineering
University of Minnesota

OF THE many factors which contribute to the satisfactory performance of built-up roofs, one point stands out above all others: construction of a satisfactory roof is possible only when high standards are maintained in all phases of its construction. Failure in one respect will negate perfection in others.

Most roof failures can be avoided if these recommendations are followed:

1. All plies of roofing felt should be mopped solidly with the bitumen.
2. All felts should be "broomed down" thoroughly as quickly as possible following the application of the bitumen.
3. Rigid control should be maintained over the temperature of the bitumen.
4. A vapor seal course must be used over all roof decks in cold climates and in temperate climates wherever conditions of high inside humidities exist. A vapor seal course must also be used where the roof deck itself contains an appreciable amount of moisture.
5. Roofs should be constructed according to proved and accepted specifications.
6. Special precautions are necessary when applying roofs to concrete decks in order to prevent the residual moisture of the concrete from entering the roof structure. This may be accomplished by using a vapor seal course or by positive sealing of the surface.
7. Roofing materials having a high moisture content should not be used.
8. A roof should not be applied during inclement weather or upon a deck which is not thoroughly dry.

HOW A PARTICULAR ROOF BLISTERS DUE TO VAPOR

The various factors that attribute to the blistering of built-up roofs as discussed in Part 1 will be reviewed by the means of a specific example; for this discussion it will be assumed to be an insulated built-up roof with a wood, steel, gypsum plank or poured concrete deck. *This roof does not have a vapor seal.*

In cases of high indoor humidities or of normal indoor humidities and low outdoor temperatures, there will be a tendency for vapor movement from inside to outside. Thus, if these conditions prevail, vapor will migrate through cracks in the roof deck, if there are any, to the cold side of the insulation and collect directly below the roofing. If good adhesion is attained between the first layer of roofing and the insulation, the moisture will accumulate within the insulation adjacent to the roofing itself.

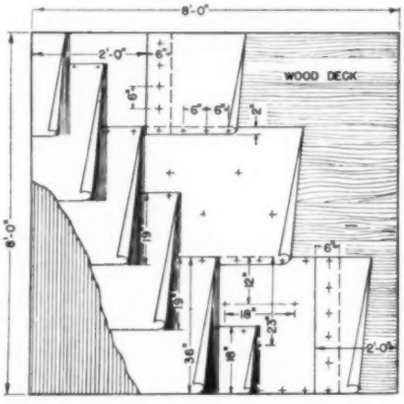
However, if the built-up roofing is not solidly mopped or good adhesion between plies is not obtained, the vapor may continue on through the roofing wherever it is able to find an opening and condense. Usually the final coat of mopping is solid to provide a waterproof surface on the exterior and this coating acts as a final vapor stop to resist the movement of moisture to the outside air.

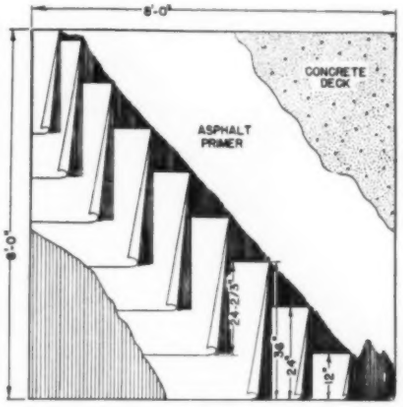
Whether or not blistering will take place is determined by the size of the openings through which the vapor can penetrate from the warm side into the roofing plies, and the length of time of exposure to such a condition.

Upon a rise in air temperature and exposure to solar radiation, the vapor pressure will increase. If this accelerated pressure rise is greater than that which can be relieved through the small openings of the roofing plies which permitted the entrance of vapor, then blistering is apt to occur. If the mopping between the plies has been extremely poor, a layer of water or ice will form at these points which causes further separation of the plies.

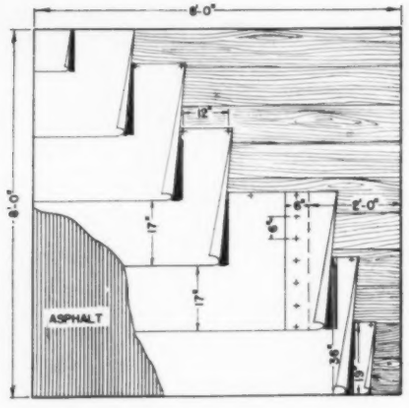
A fact to remember, however, is that the roof decks, themselves, have some resistance to vapor movement and may serve to reduce the amount of condensation, depending on the tightness of construction.

For wood, steel and gypsum plank decks where there are a number of joints

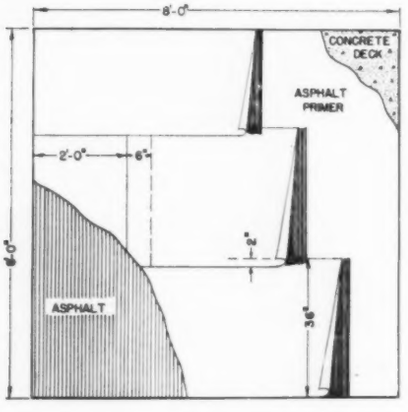




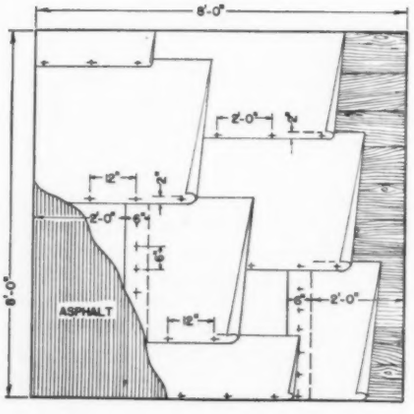
Drawings on this page show two of four common types of built-up roofs of the 10-year guarantee type which were tested at the University of Minnesota for vapor transmission. Since these 8-by-8-ft specimens were determined to be impermeable to vapor, and since the tests did not include such other conditions as effect of traffic, etc., no longer-guarantee roofs were tested. Materials and construction were: (1) single layer of 30-lb felt laid dry, two layers of 15-lb asphalt felt solidly mopped with 30 lb of asphalt per square, top surface of 30 lb of asphalt per sq; (2) three layers of 15-lb asphalt felt mopped to deck with 30 lb of asphalt per sq, top surface of 30 lb of asphalt per sq



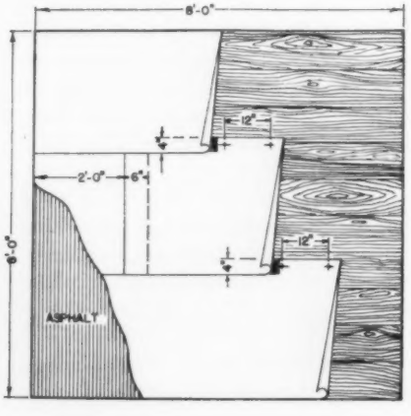
1



2



3



4

between the various members of the deck, the possibility of any pressures being developed to cause blistering is remote. Due to the low resistance of the insulation toward such pressures, any built-up pressure which can be released through the insulation and the joints in the deck, and which is less than that to cause raising of the built-up roofing, will be dissipated or escape to the warm side in the form of vapor and air.

The danger in this type of construction is that, although it provides a pressure release for any changes in air and vapor pressure, it does not insure against excessive moisture accumulations within the insulation.

Any amount in excess of that which can be safely absorbed will be in a liquid state and tend to saturate the insulation and may even cause, under extreme conditions of humidity and outside air temperature, dripping of free water.

In the case of a poured concrete deck, the only avenue for residual moisture to escape is through shrinkage cracks, and in this case blistering is likely if no vapor seal has been applied over the deck.

WHEN IS A VAPOR BARRIER NECESSARY?

In the initial design of a building, the operating requirements together with its location in a temperate zone may justify the omission of a vapor seal course (poured decks excepted). However, there is no assurance that these operating conditions will continue to exist throughout the life of the building. A change in occupancy may require relatively higher humidities on the inside which will result in vapor movement into the roof.

To overcome these unpredictable situations and to insure positive control of moisture migration into roofs, a vapor seal course is required.

If no roof deck is used and the insulation is applied directly over joists or purlins with the under side of the insulation exposed, a vapor seal course may not be necessary. The reason for this is that for limited quantities of vapor movement during cold periods of exposure, the vapor or moisture is able to escape through the warm side without any obstruction when the outside temperature increases. Under these conditions it is necessary to take precautions to avoid excess quantities of accumulated moisture.

It is sometimes thought that partial vapor barriers will permit the release of moisture and pressure to the warm side when the outside air temperature rises. The use of partial vapor barriers over different types of decks will obviously permit a certain quantity of vapor to be transmitted. This decreases the resistance of the vapor seal course, and moisture accumulation may be so large that free water will result adjacent to the upper surface of the deck or within the insulation and the roofing plies.

After very cold weather, there is generally a period of moderate temperatures which may vary between 30 F and 45 F for quite some time. Unless sun exposure is considerable, moisture accumulated during this time will remain within the roof structure for quite a while before it has an opportunity to escape. Upon the approach of warm weather, a vapor pressure difference will be set up which will cause this moisture to evaporate.

During this warmer weather, however, the temperature increase usually is so rapid due to solar radiation, that the pressure developed for the air and vapor far exceeds that which can escape through the warm side of the deck. This results in a force which is greater than the weight of the roofing and causes the roof to blister.

It is evident that to control the movement of vapor or moisture into built-up roofs, it is necessary to have a vapor seal course.

VAPOR SEAL COURSES

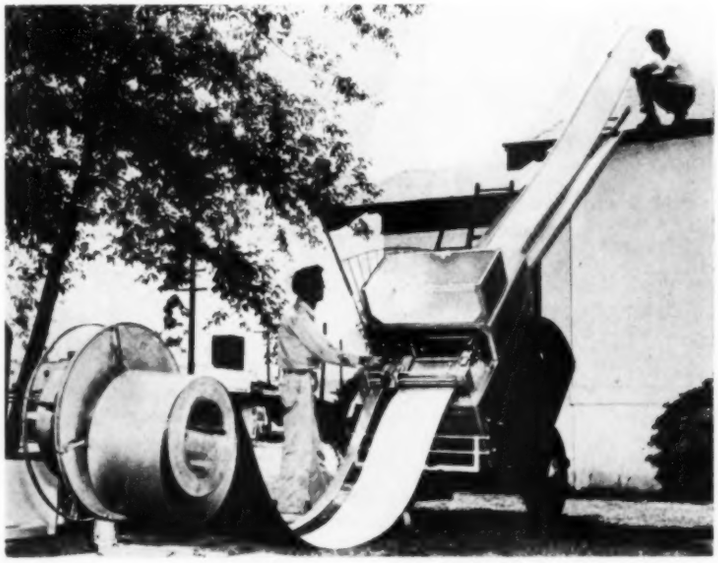
The use of an approved type of vapor seal course is of utmost importance in built-up roofs. There are several types which may be used. Laboratory tests have shown that a two-ply, solidly-mopped 15-lb felt will prevent vapor from entering a roof structure. Similar vapor seal courses are also efficient.

Concrete decks regardless of the location or use of the building require a vapor seal to prevent the moisture which results from curing of the concrete from seeking an escape into the insulation or

(Continued on page 222)

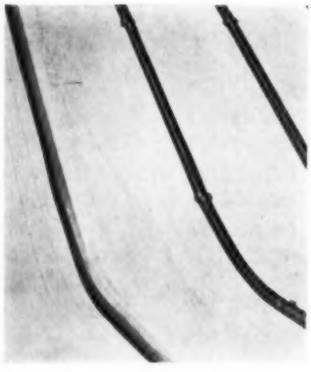
Four types of vapor seal courses were tested and found satisfactory: (1) two layers of 15-lb felt with all laps solidly mopped back 17 in. with 30 lb of asphalt per square, top surface — 30 lb of asphalt per sq; (2) one layer of 15-lb felt laid in 30 lb of asphalt per sq, top surface — 30 lb of asphalt per sq; (3) one layer rosin sheathing paper, one layer 15-lb felt, top surface — 25 lb of pitch per sq; (4) one layer 45 lb base felt with coated side down (back edge solidly mopped and nailed), top surface — 30 lb asphalt

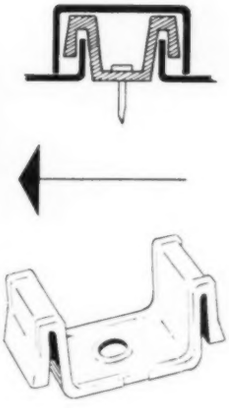
NEW DEVELOPMENTS IN ROOFING



Above: machine is brought alongside house, forms panels and feeds them up to roof. Below, left: cut-to-length panels are applied to roof. Below, center: close-up showing panels and clip fastenings both with and without batten covering. Sketch at right, below shows the fastening clip and detail of batten-and-clip construction









Right: Plastic roof covering being sprayed on steep pitch of Sherry-Netherland Hotel's roof. The workman shown here sprayed the compound on the roof, while two others inside the building operated the compressor and the mixer

(See page 226)

TWO INNOVATIONS in roofing have recently been announced:

• A new system for on-the-job forming and applying of custom-tailored aluminum roofs will soon be nationally available through franchised applicators. Known as *Roliton*, the process employs portable machines which form continuous roofing panels and battens from aluminum rolls. Originally developed and patented by Architect Glen Huntington of Denver, the process was further developed by the franchiser's research staff. A finished roof has a continuous pan, no seams, no end laps, no exposed nailing, and uses a batten and clip fastening which has tolerance allowance for contraction and expansion.

Here's how the roof is applied: The patented roll forming machine is brought alongside the house where the roof is to be installed. A guide rack is set up, running from the machine to the roof, so that the formed panels of aluminum can be passed up directly to the roof surface. No scaffolding or other heavy equipment which might injure lawns or shrubbery is employed. Before the roof itself is applied, a 30-lb overlapping felt base is laid, giving the roof its first seal. Next, the coils of aluminum are set to feed into the machine. The aluminum moves through stainless steel dies which form it to the exact measurements for the roof. Flanges on each edge of the panels are also formed as the metal passes through the machine. Now, patented aluminum clips are fastened to the roof understructure and are attached to the panels at regular intervals. Battens, also formed to exact measurements by the machine, are then snapped over both panel flanges and clips, forming a weather-tight seal without any fastenings exposed to the elements. Vents, valleys, chimneys, cooling equipment ducts, dormers and parapet walls are carefully flashed in aluminum, and the installation is complete. Both panels and battens extend over the eave line to assure complete protection against wind or blowing rain or snow. Among advantages of the installed roof cited by the franchiser are high reflective insulation, low heat radiating power, air circulation which permits the roof to "breathe," increased protection against hail, and deadening

(Continued on page 226)

CONTEMPORARY LIGHTING





New brochures reviewed below are among recent manufacturers' literature dealing with lighting equipment and design

Two brochures on contemporary lighting methods and fixtures have recently been made available:

• *Some Whys and Hows of Modern School Lighting.* Booklet gives current recommended lighting levels for various locations in the school, and for pupils with normal vision or with defective vision, as sponsored by the Illuminating Engineering Society and the A.I.A. Cost comparisons for incandescent and fluorescent are indicated, showing the savings at various power rates. Willard Allphin, the author, has included before and after photographs of classrooms using both types of lighting, and a cross section which shows reflection factors desirable for schoolroom surfaces in percentages. Various types of lighting systems are illustrated, and a test for determining how lighting equipment measures up to modern standards is also included. 14 pp., illus. Sylvania Electric Products, Inc., 1740 Broadway, New York 19, N. Y.

• *Contemporary Lighting.* Kurt Versen catalog is divided into four parts: Recessed, Indirect, Swivel and Custom Built. Each section is generously treated with photographs, diagrams, cross-sections, graphs and drawings, and a complete description of the various fixtures is given — as to sizes, finishes, mountings, lamps used, etc. Exclusive features of all types are included, as is installation information. 60 pp., illus. Kurt Versen Co., Englewood, N. J.

ASPHALT TILE FLOORING

Hako Asphalt Tile Flooring Ideas. Portfolio of sketches is divided into two sections: for business and commercial, and for the home. The sketches are a series of original designs, created to direct the eye to particular points of interest in stores, etc., and to form interesting and esthetic patterns for the home. Designs are given for island displays, to create the illusion of space, for directing traffic at elevators and moving stairways, and for division of departments in stores. The sketches of designs for home floors consist of children's play rooms, kitchen and utility rooms, hobby and recreation rooms, as well as dining and living areas. 25 sketches. Hachmeister, Inc., Pittsburgh 13, Pa.

AIR CONDITIONING

G-E Air Conditioning Investment Analysis. Two handy booklets, one covering stores and restaurants, and the other industrial and office installations, give the formula of an investment analysis technique which has been developed to determine in dollars and cents the effect of air conditioning on sales and commercial incomes. 4 pp. ea., illus. Air Conditioning Division, General Electric Company, Bloomfield, N. J.*

ARCHITECT'S FURNITURE

The William Armbruster Collection. Catalog contains loose leaf pages, each illustrating different types of furniture designed by Mr. Armbruster. Photographs of the item alone and in a furniture setting are supplemented by line drawings showing dimensions. As an added feature, there is included with the catalog a color and texture sample folder and a complete price list. The sample folder includes finishes for steel frames, decorative webbing for metal chairs, wood finishes, plastic on fabric, and top grain leather. Edgewood Furniture Co., Inc., 334 E. 75th St., New York 21, N. Y.

(Continued on page 282)

Other product information in Sweet's Architectual file, 1953

STRUCTURAL FORMS — 22: THIN SHELLS OF REINFORCED CONCRETE

By Seymour Howard, Architect, Instructor at Pratt Institute

B SHELLS CURVED IN TWO DIRECTIONS

These provide greater stiffness by their shape alone than shells curved in only one direction. Their surfaces are non developable. They cannot be made by bending a flat sheet as can all surfaces curved in only one direction. The formwork, therefore, is usually more complicated and they have been used less frequently.

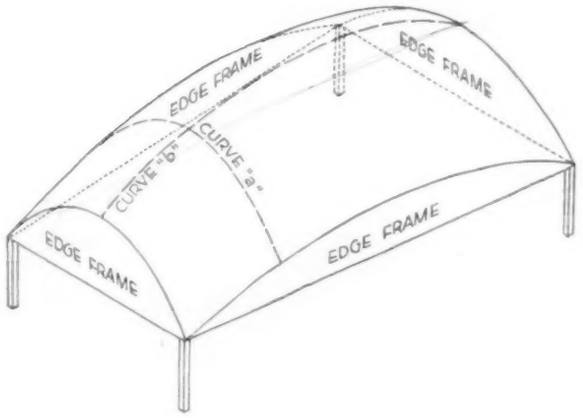
B-1 BOTH SETS OF CENTERS OF CURVATURE BELOW SHELL *(Synclastic or Dome Surfaces)*

General Case:

Surface generated by one curve ("a") sliding along another ("b") at right angles to it.

Curve "a" may vary as it slides; curve "b" may be of any shape, provided the center of curvature is always below. It is possible to vary curve "a" so that the surface will curve smoothly down to the flat plane (vertical edge frames would disappear).

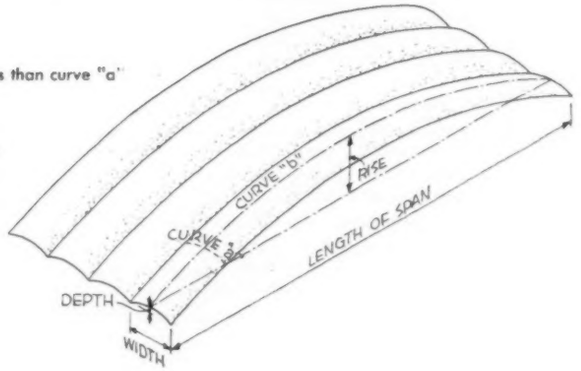
Edge frames correspond to transverse stiffeners or end frames shown for shells curved in one direction. Edge frames may be: vertical diaphragm; rigid frame or truss, integral with supports or simply supported; stiffeners in edge of shell, with tension ties between points of support.

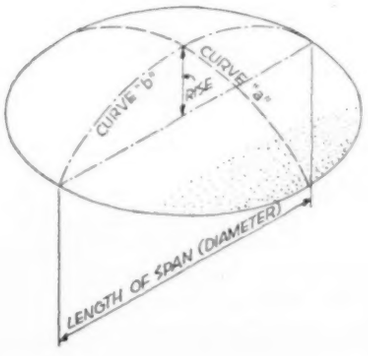


Extreme Cases:

Curve "b" of much greater radius than curve "a"

Rise may be ⅛ of length of span; width may be $\frac{1}{10}$ of length of span; depth may be $\frac{1}{10}$ of width of span; Max. length of span 500 ft or more. This shell approaches an arch of curved cross section. This type can be effectively combined with anticlastic shells of similar dimensions to form a corrugated surface (see B-3 subsequent issue).





Curve "b" of same radius as curve "a"

▲

Rise may be as low as ⅛ of length of span. Max. length of span built 156 ft; much greater possible. This type is most simply considered as a surface of revolution.

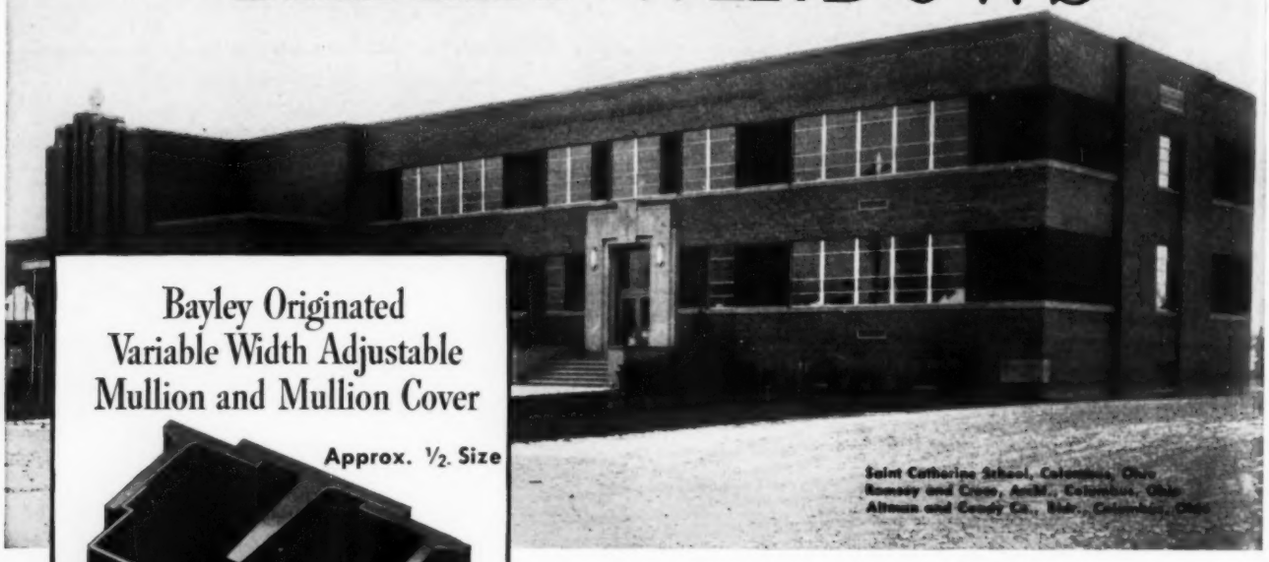
Thickness is based on same considerations as for shells curved in one direction (see sheet 15). Danger of buckling starts with 2⅝ in. thickness for 100-ft radius of curvature. For non spherical shells, thickness should be increased at points where radius of curvature decreases in comparison with radius of imaginary circumscribed sphere.

REFERENCES: As listed on sheet 24, especially A.C.I. Journal, May–June 1938; E. C. Molke and J. E. Kalinka. Also: International Association for Bridge and Structural Engineering. Zurich:

Vol. 1 (1932); F. Dischinger: "Contribution to theory of wall-like girders"

Vol. 4 (1936); F. Dischinger: "Shell construction in reinforced concrete"

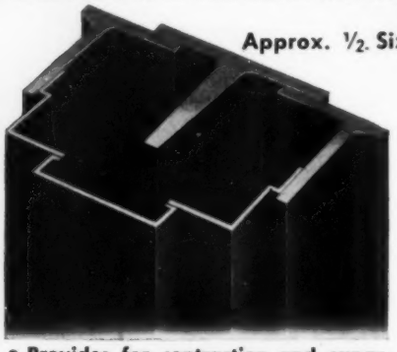
Where the *other* services also count – it's always BAYLEY WINDOWS



Saint Catherine School, Columbus, Ohio
Ramsey and Crane, Archts., Columbus, Ohio
Altman and Condy Co., Bldr., Columbus, Ohio

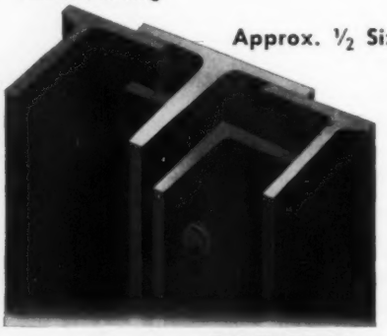
Bayley Originated Variable Width Adjustable Mullion and Mullion Cover

Approx. ½ Size



- Provides for contraction and expansion, insuring good contact at jambs
- Adjustable ½" plus or minus variation in masonry dimension
- Attractively conceals all bolts against corrosion hazard
- Provides two direction slip joint
- Lintel or building load do not bear on window — preventing distortion and assures proper ventilator operation
- Cost-reducing clip and bolt assembly
- Tight window and mullion fit, facilitates caulking

Approx. ½ Size



74 Years of RELIABILITY

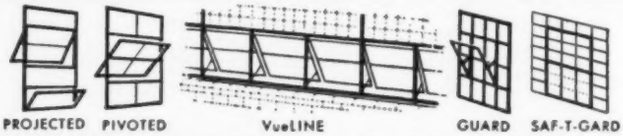
Bayley Projected Windows provide the modern school with better ventilation, vision and natural daylighting

The "better-serve" policy that, for so many years, has keynoted Bayley's client relationship is readily apparent in numerous ways. Constant improvement in product detail and quality is one. Another is exemplified in the Bayley Aluminum Projected Window (offered also in steel) that was designed to provide the window features requested by school authorities. Such

Modern appearance • Economy—painting unnecessary • Permanence — long carefree life • Simplicity — no complicated mechanism • Adaptable to all types of construction • Glazing outside — flat surface inside • Easily washed from inside • Prepared for screens • Permits use of accessories, such as draperies, shades, curtains, venetian blinds or awnings.

Whatever your window requirement may be, Bayley's years of specialized window experience can undoubtedly be of value to you. Write or phone.

See Bayley in Sweet's. Complete catalogs on aluminum windows, 16a/Bay; steel windows, 16b/Ba; Saf-T-Gard Hospital Detention Window, 16b/Bay.



PROJECTED PIVOTED VueLINE GUARD SAF-T-GARD

THE WILLIAM BAYLEY COMPANY

Springfield, Ohio

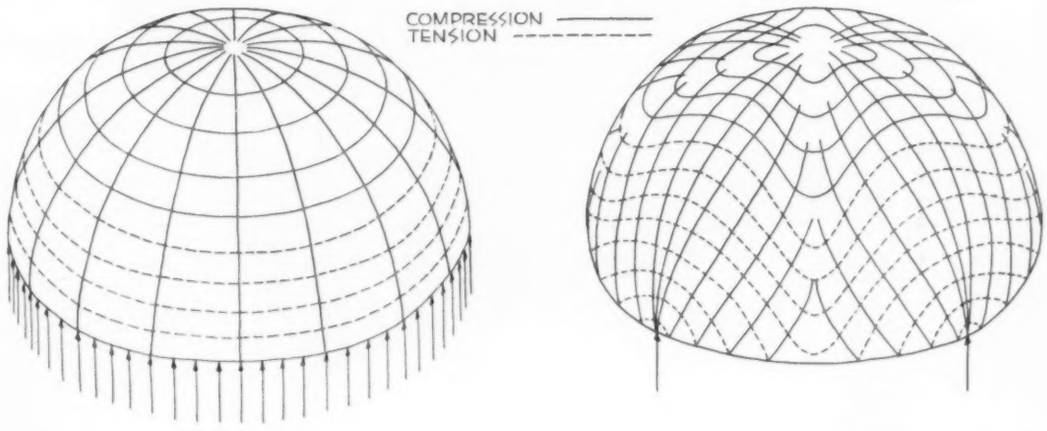
District Sales Offices:

Springfield Chicago 2 New York 17 Washington 16

STRUCTURAL FORMS — 23: THIN SHELLS OF REINFORCED CONCRETE

By Seymour Howard, Architect, Instructor at Pratt Institute

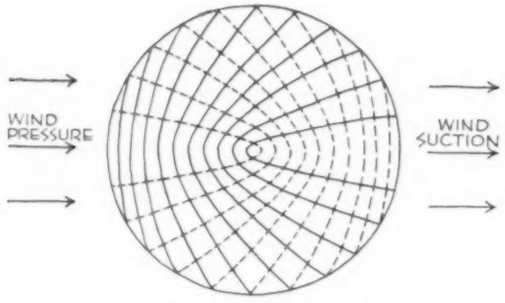
B-1 BOTH SETS OF CENTERS OF CURVATURE BELOW SHELL *(Continued)*



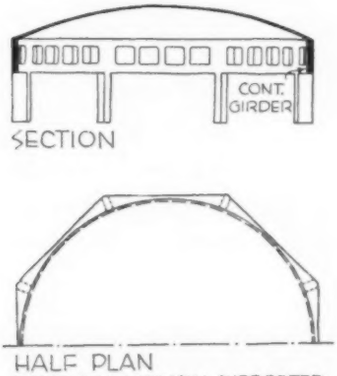
Continuous Support

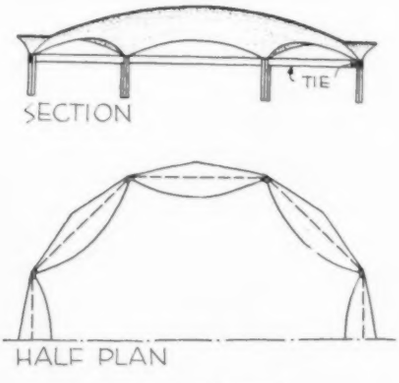
Four Points of Support

Stress Trajectories for uniformly loaded spherical domes

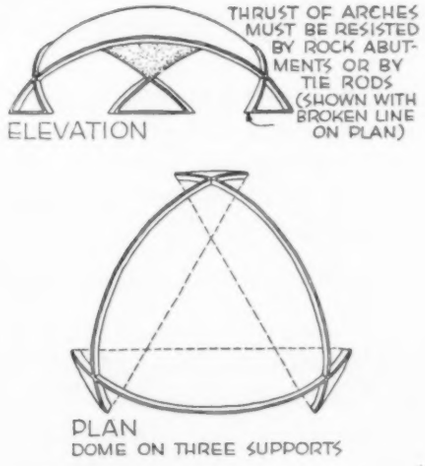


Plan of continuously supported spherical dome showing trajectories of stresses caused by wind loading





Dome on eight supports



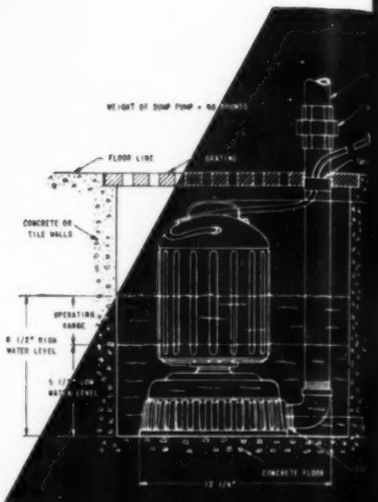
Examples of various arrangements of supports

You can recommend them with confidence

FAIRBANKS-MORSE

NEW Submersible Cellar Drainer





You and your clients can be sure of ample, dependable protection against damage in basements by flooding if you have this *new* Fairbanks-Morse submersible cellar drainer installed!

It has many advantages. It can be concealed in a sump only 16″ x 16″ x 16″. (See diagram). It will discharge as much as 3600 gph. against a 10-foot head. The big screen area permits only trash-free water to reach the impeller. Operating range is set at the factory. Thus, no float adjustment is necessary. Motor and operating switch are enclosed in a water-tight stainless steel housing which also serves as a float control.

FAIRBANKS-MORSE

DEEP WELL SUBMERSIBLE PUMP



Architects, builders and drillers in all parts of the country are recommending the sensational Fairbanks-Morse submersible pump. It features complete submersion of *motor and pump;* absolutely quiet operation; ease of installation; minimum maintenance; single instead of double lengths of pipe; and a range of capacities at depths to 140 feet to meet all requirements.

Send for Specifications

If you do not have complete specifications of the deep well submersible pump and the submersible cellar drainer in your files, ask to have them sent at once. Address, Fairbanks, Morse & Co., Chicago 5, Illinois.

FAIRBANKS-MORSE

a name worth remembering when you want the best

HOME WATER SERVICE AND LAUNDRY EQUIPMENT • ENGINES • GENERATING SETS • HAMMER MILLS • MAGNETOS • MOTORS • MOWERS • PUMPS

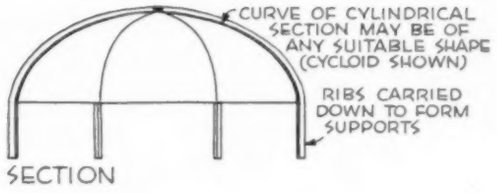
STRUCTURAL FORMS — 24: THIN SHELLS OF REINFORCED CONCRETE

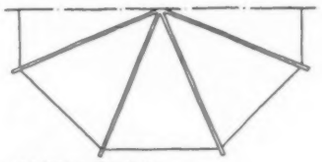
By Seymour Howard, Architect, Instructor at Pratt Institute

B-1 BOTH GROUPS OF CENTERS OF CURVATURE BELOW SHELL *(Continued)*

Polygonal Domes:

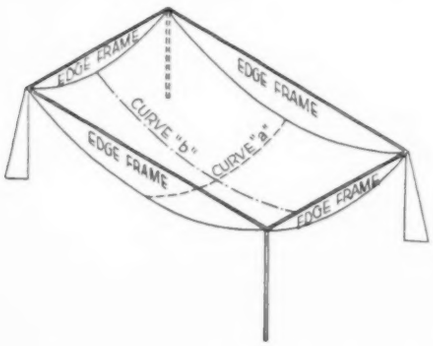
These are made up of short sections of cylindrical shells (curved in only one direction); the lines of intersection form stiffening frames. They approximate surfaces of revolution and at the same time provide simpler formwork and an easier transition to a non-circular ground plan.





NOTE: With symmetrical loading, no bending moments are induced in the ribs at the intersection of adjacent shell sectors

B-2 BOTH GROUPS OF CENTERS OF CURVATURE ABOVE SHELL



A shell of this type is exactly the opposite of type **B-1** and the surface generated in same way, except that the center(s) of curvature of both curve "a" and curve "b" lie above the shell.

This is essentially a tensile form of relatively limited use, except for the bottoms of tanks (reservoirs, silos, etc.)

REFERENCES:

See reference noted on sheet 16; this book contains extensive bibliography.

Hajnal-Konyi: "Shell Concrete Construction" in Architect's Year Book:2. London 1947.

Felix Candela: "Simple Concrete Shell Structures." Journal American Concrete Institute December 1951.

Charles S. Whitney: "Cost of Long Span Concrete Shell Roofs." Journal American Concrete Institute June 1950.

Eric C. Molke and J. E. Kalinka: "Principles of Concrete Shell Design." Journal A.C.I. May–June 1938.

February 1953. A.C.I. Journal has three articles on shell construction:

Anton Tedesko "Construction Aspects of Thin-Shell Structures."

Charles S. Whitney "Reinforced Concrete Thin Shell Structures."

Pier Luigi Nervi "Precast concrete offers new possibilities for design of shell structures."

International Association for Bridge and Structural Engineering, Zurich; many articles in their published "Mémoires."

Interviews with:

Robert Zaborowski, of Roberts and Schaefer Co.; Boyd G. Anderson and Edward Cohen, of Ammann and Whitney; John Hogan of the Portland Cement Association.


Yes you can install this modern VINYL

NYile flooring in slab construction homes!

MATICO ARISTOFLEX

in low-cost standard gauge

Because MATICO Aristoflex is vinyl-plastic throughout (no felt backing!), it is ideal for installation on concrete, either on or below grade, as well as on suspended wood and concrete floors.

And how attractive it's other qualities are! The smooth, non-porous surface resists acids, greases and alkalis . . . stays clean and fresh-looking as the day it was installed. The sparkling colors and marbleization go clear through each tile . . . last the life of the floor. And the 13 radiant colors offer virtually unlimited design possibilities.

Cost? In standard gauge, MATICO Aristoflex is comparable in price to grease-proof asphalt tile. It's precision-made . . . lays in easily, requires less handling by the mechanic, saves appreciably in labor costs.

Consider MATICO Aristoflex when next you specify tile flooring. Write today for specification data and full details.

Also available in 1/8" thickness.

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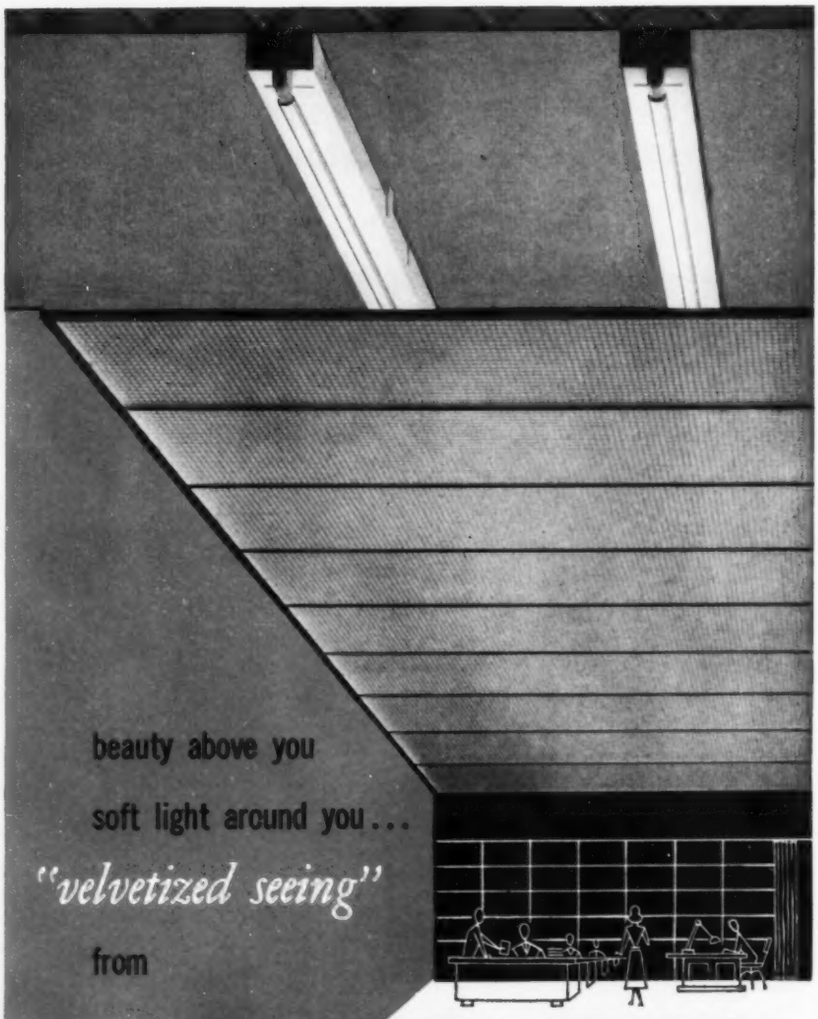
MASTIC TILE CORPORATION OF AMERICA
Dept. 9-8, P.O. Box 986
Newburgh, N. Y.

Please send me specification data, color chart, and full details on MATICO Aristoflex.

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City_____ Zone____ State_____



GUTH GRATELITE* CEILINGS

covered from wall to wall with GrateLite, the diffusing plastic louver . . . an architectural dream.

Diffusion through 3/8" translucent cubical facets produces finer quality illumination . . . fills the room with soft light for "VELVETIZED SEEING". It keeps your eyes "at rest" and makes your work easier.

simple installation: Just 5 parts to handle.

easy maintenance: Relamp by removing only 1 panel. Panels can be detached and washed in 2 minutes . . . just shake in detergent water.

Start a new era of eye comfort—with up to 200 foot-candles! Write today on your letterhead for folder 905-J and GrateLite layout guide.

Guth

THE EDWIN F. GUTH CO. ST. LOUIS 3, MO.

*U. S. & Can. Pats. Pend.
Trademark Registered

(Continued from page 210)

Insulation applied directly to a concrete deck is usually solidly mopped to the concrete surface. This mopping provides a resistance to the passage of moisture from the concrete to the insulation, but does not provide a complete vapor seal. A similar procedure is used in the application of roof insulation to wood or metal decks with some modifications to prevent the bitumen from dripping through cracks into the space below.

For all three types of decks (concrete, wood or metal) the deck material itself constitutes a reasonably good vapor barrier. For these decks the primary passage for water vapor is through cracks and joints. Since this passage is blocked by a layer of felt and bitumen mopping, large quantities of moisture are prevented from entering the insulation. Although apparent difficulties may not be encountered through the use of construction methods described above, even where conditions of low outside temperatures and high humidities exist, such practices are not recommended as a substitute for an approved vapor seal course.

INSTALLATION PRECAUTIONS

Care must be taken to keep roof insulation dry at all times. Under no circumstances should the insulation be exposed to inclement weather from the time it leaves the manufacturer until it is sealed within the roof.

The application of the final plies of roofing felt is one of the most important processes in the construction of a roof. The material should be dry and all surfaces should be free of moisture. The application of the roofing during the inclement weather which brings rain or snow will result in roof failures, irrespective of the quality of workmanship.

Considerable emphasis has been placed upon solid mopping of the roofing plies to obtain a positive adhesion between the plies. Poor or incomplete adhesion may result from lack of brooming down the felts, creasing of the felts during application, the practice of strip or spot mopping, the use of materials having high moisture content, delaying in brooming down the felts following the application of hot bitumen, or the application of the bitumen at improper temperatures.

AN INVITATION TO VISIT A LABORATORY TO THE BUILDING INDUSTRY... THE ALCOA BUILDING

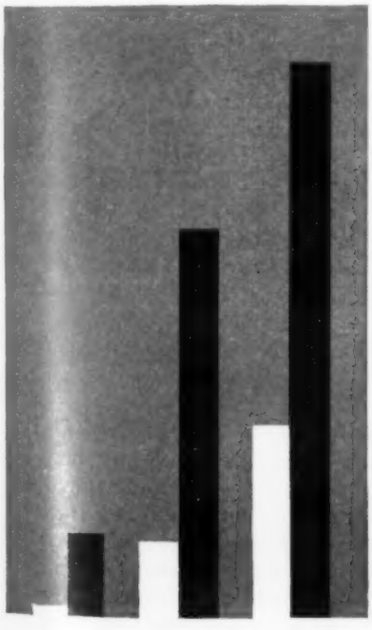
As an architect, designer or contractor, you've probably had a keen desire to see and thoroughly inspect aluminum in a variety of interesting applications in one completed project. Perhaps you have thought of specifying aluminum for curtain wall panels with windows built into them, or ceilings of aluminum which would supply year-round controlled temperatures, or all-aluminum electrical distribution or water service systems.

The new Alcoa Building has been built to include all these practical applications of this metal of all trades and many more. Years of research plus the ingenious designs of the architects and engineers have created this unique and efficient headquarters building for Alcoa.

During September, Alcoa extends a sincere invitation to those of you with an interest in new and unusual applications of aluminum to come to visit the Alcoa Building, a laboratory to the building industry, opening this month. Aluminum Company of America, 1888-J Alcoa Bldg., Pittsburgh 19, Pa.

Alcoa Aluminum

ALUMINUM COMPANY OF AMERICA



Before World War II the aluminum industry sold 18 million pounds annually to building field—only 6% of its 300-million-pound total production. *Before Korea* it was selling 280 million pounds—20% of 1.4-billion-pound output. Best market research indicates rise to 700 million pounds annual consumption by building trades—35% of 2-billion-pound industry capacity.



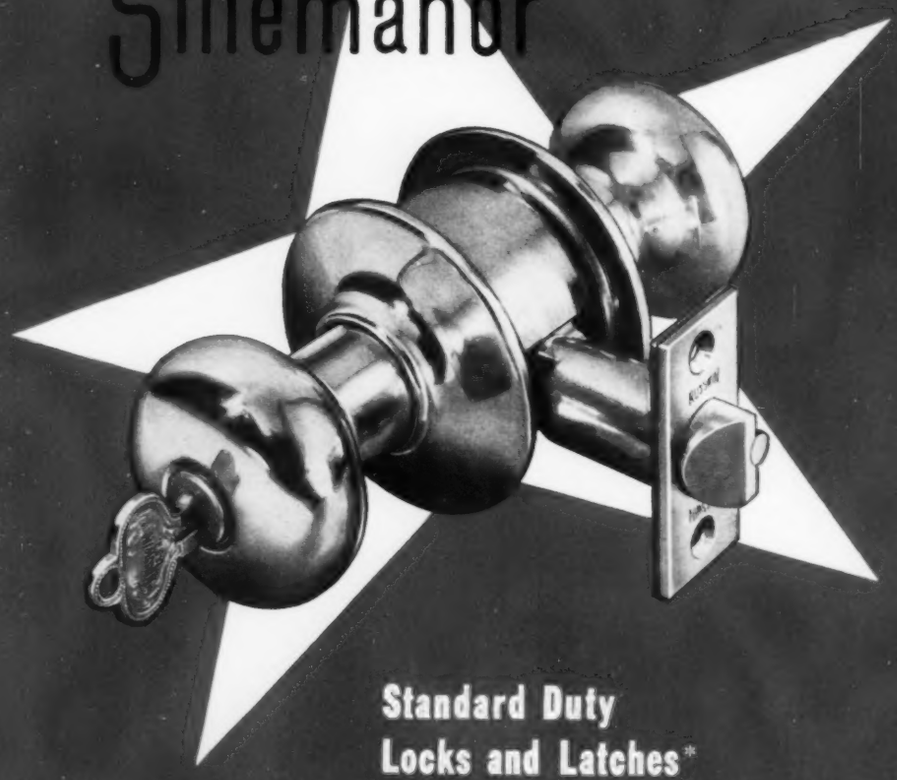
Aluminum windows will be closed and locked except for cleaning, effected from the interior by pivoting window on vertical axis. In cross section, windows contain sections ¼-inch-thick plate glass, ½-inch air space and ¼-inch-thick heat-absorbent plate glass on the weather side.



Radiant heating and cooling system is first of type in this country. It is designed to handle all winter-heating requirements and summertime cooling; including acoustical comfort.

First Showing !...

a brilliant New Star the RUSSWIN® "Stilemanor"



Standard Duty Locks and Latches*

From its precision-made parts of pressed steel to its modern design and durable finish the "Stilemanor" is another masterpiece of Russwin Craftsmanship. It has twenty advanced design features that put it in a class by itself . . . a striking example of results gained by the use of modern manufacturing methods and equipment. You can recommend the "Stilemanor" for fine homes and small commercial buildings with full assurance that it will prove "the economy of quality" year in and year out.

*Patents Applied For

Be SURE to satisfy . . . specify RUSSWIN throughout



Door Stops and Holders | Gravity Pivot Hinges | Door Pulls, Push Plates, etc. | Surface Door Closers | Fire Exit Bolts

(Continued from page 211)

of noise from rain and hail. Roliton of America, 714 E. Van Buren, Phoenix, Ariz.

• A technique for spraying a Vinylite plastic coating over an old roof surface was successfully employed in resurfacing the sharply-pitched gables of the 40-story Sherry-Netherland Hotel in New York. Known as *Plastispray*, the technique is a direct application of the mothballing technique used by the Navy after World War II. On the Sherry-Netherland project, it is reported to have saved both time and money. The estimate for replacing the old copper roof was approximately $50,000, and the work would have taken several months. The cost was one-eighth of this for the sprayed plastic roof and the working time was 20 days. Despite a difficult roof situation, the job was accomplished without elaborate scaffolding and with minimum labor. One worker in a bosun's chair applied the coating, while two others controlled the mixing and compressor units from inside the building. To preserve the appearance of the original copper roof, a shade of green plastic which closely resembled the patina was used. Some 500 gal. of vinyl resin-based coating were applied over 10,000 sq ft of roof surface. This included a base coat. All seams and joints were caulked with a special plastic compound.

The spraying technique requires no drop cloths for protection of pedestrians below nor respiratory masks for spray gun operators. Even when atomized the plastic will not form a mist. The roof reportedly is unaffected by weather and extreme temperatures for long periods. Progressive Industries, Inc., 48-08 Van Dam St., Long Island City, N. Y.

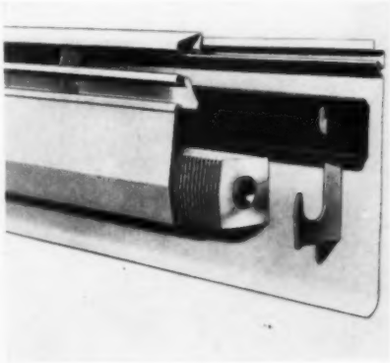
BASEBOARD HEATING PANELS

A new line of baseboard heating panels has been announced by Tuttle & Bailey. Styled by designer Walter Dorwin Teague, the panels are streamlined in appearance and, when installed in place of conventional baseboard, save valuable floor space. Finished in prime coat, panels may be painted to match wall or trim.

Cool room air enters at the base of the panel, is heated as it passes through the fins of the element, and re-enters the room through the opening at the top of the panel. Constant, gentle circulation

of air is said to result in even temperatures from floor to ceiling, more comfortable rooms, no stratification, no drafts.

Design features include one-piece front and back panels which facilitate installation. The heating element consists of 1-in. copper tubing which is expanded to hold fins securely in place. Fins are



Baseboard panels circulate air gently without causing drafts

specially designed to help insure greater heating capacity. Accessory equipment includes a lever-operated damper, outside corners, inside corners, end caps, and joiner strips. All accessories can be installed without the use of tools. Types are available for both recessed and free-standing installation. Both types are available in 5-ft. and 6-ft. lengths, and are conveniently packaged as complete units. Tuttle & Bailey, Inc., Corbin Ave., New Britain, Conn.

UPHOLSTERY FABRIC

A new rayon-based material, "*Toloron Straw*," now being manufactured in seven colors, is the first plastic coated fabric using this type of base to be introduced by the manufacturer. The pattern has the appearance of woven straw and is available in 26-oz weight and 54 in. widths. The new material is reported to have a high tear strength and is easy to work, especially in upholstering corners. It is also described as easy to clean, long wearing, and resistant to stains, both water and oil. The colors available include natural straw, yellow, fern green, antique white, red, turquoise and coral. Textileather Corp., 607 Madison, Toledo, Ohio.

(Continued on page 232)

The New Russwin "Stilemanor" has attractive styling precision construction...

The "Stilemanor" line has knobs of clean, crisp design . . . sure to appeal to the most discriminating tastes. It is available in wrought brass, bronze and aluminum . . . all popular functions . . . includes entrance door sets with large escutcheons.

"Stilemanor" constructional features include: dual bearings on each knob to assure rigid knob assembly and prevent knob wobble; brass to steel bearings; self-aligning thrust bearing on knob spindle; latch retractor that glides on ball bearings for smooth easy action and long life; knob retainers concealed behind rose; exclusive Russwin ball bearing, pin-tumbler cylinder on all entrance door sets; simple installation — only two holes to bore, all alike for every door.

Be sure to see the new "Stilemanor" line. Check and compare all its features. Russell & Erwin Division, The American Hardware Corporation, New Britain, Connecticut.



"Stilemanor" 340 entrance door set has turn-button inside, cylinder outside and tamper-proof dead locking latch. 330 . . . same as 340 but without dead locking latch.



"Stilemanor" 320 bathroom-bedroom set has push button, automatic releasing mechanism and emergency key provision. 322 . . . same as 320, no emergency key but has auxiliary latch.





"Stilemanor" 310 passage door and closet set operates by knob either side at all times.



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DISTINCTIVE HARDWARE

Be SURE to specify . . . specify RUSSWIN throughout



"400" Closers | Overhead Door Holders | Miscellaneous Hardware | "Ten Strike" Cylinder locks

BUFFALO'S LARGEST PUBLIC HOUSING—

Dante Place



DANTE PLACE
PROJECT
Buffalo, New York



—is 100% equipped with AllianceWare Bathtubs

ARCHITECTS: Backus, Crane & Love, Buffalo, New York
PLUMBING CONTRACTORS: Carl C. Grimm and Henry M. Deckert, Inc., Buffalo, New York

This seven-building Dante Place project containing 616 dwelling units has been completed recently in Buffalo, New York.

In these buildings every bathroom has an AllianceWare bathtub. A total of 816 tubs were installed—making the installation 100% AllianceWare.

You'll find AllianceWare in the largest projects. You'll find AllianceWare in the finest apartments and hotels. You'll also find AllianceWare in both pretentious and modest homes, and you'll find AllianceWare in remodeled bathrooms of old homes.

That's because AllianceWare—porcelain-on-steel is designed to meet modern building needs. Lighter in weight for easier handling and easier installation. Porcelain-on-steel to assure a lustrous, stainproof, glistening, glass-hard surface. Formed steel to provide exactness of dimensions and to avoid useless, unnecessary weight. Five beautiful colors—as well as white—to meet the ideas of the most color-conscious.

Whether for an extensive housing project, luxury hotel or apartment, or for homes of any size—the outstanding qualities of AllianceWare make it preferred by many leading architects and builders. Write for complete information describing AllianceWare—porcelain-on-steel.

ALLIANCEWARE, INC. • Alliance, Ohio
Bathtubs • Lavatories • Closets • Sinks

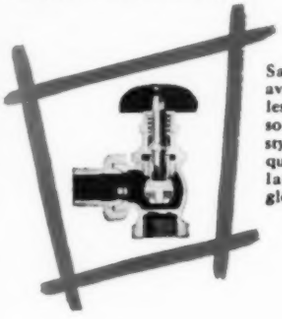
AllianceWare
PORCELAIN ON STEEL

Schools from Coast to Coast

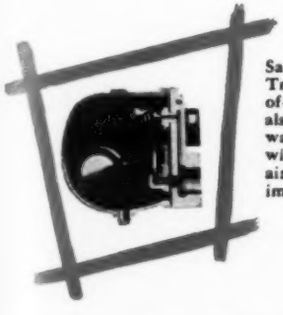


Here are just a FEW of the schools equipped with
SARCO HEATING SPECIALTIES

Sarco Radiator Trap, type H, for 30 years the standard on all types of two-pipe steam heating systems. Sizes ½" to 1", angle, straightway, offset and vertical styles.



Sarco Radiator Valve, available in spring-packless style as illustrated; also in the bellows-packless style. Sizes ½" to 1½", quick opening and modulating types; angle or globe.



Sarco Float-Thermostatic Trap, type FTL for end-of-main and riser drips; also unit heaters and hot water generators. Fitted with Sarco thermostatic air vent. Air binding is impossible.

State	*City*	*School*
California	Westwood	U.C.L.A.—Geology and Chem. Bldg.
Connecticut	Danbury	Park Avenue School
Connecticut	New Haven	Winchester Elementary School
Connecticut	Wilton	Wilton Junior High School
Florida	Haines City	Junior-Senior High School
Idaho	Coeur D'Alene	Coeur D'Alene School
Illinois	Freeport	Junior High School
Illinois	Lincolnwood	Lincolnwood Elementary School
Illinois	Wauconda	Wauconda Township High School
Indiana	Mishawaka	Bremen School
Iowa	Cedar Rapids	Buchanan Elementary School
Louisiana	Bogalusa	Bogalusa High School
Maryland	Baltimore	Edison-Barton-Mergenthaler High School
Massachusetts	Taunton	New School for Feeble Minded
Michigan	Galesburg	Galesburg School
Mississippi	Gulfport	Northeast Ward Elementary School
New Hampshire	Lebanon	Canaan Elementary School
New Jersey	Lakewood	Public School No. 5
New Jersey	Newark	Dayton Street School
New Jersey	Passaic	Grant School No. 7
New York	Bronx	Junior High School No. 125
New York	Brooklyn	Junior High School No. 14
New York	New York	Public School No. 192
New York	Roslyn	East Hills Elementary School
New York	Stony Brook	Stony Brook Elementary School
North Carolina	Lumberton	Pembroke-Rowland School
Ohio	Cleveland	Case Institute of Technology
Ohio	Lyndhurst	Anderson Road School
Oregon	Eugene	Eugene High School
Pennsylvania	Annville	Lebanon Valley College
Pennsylvania	Franklin County	Mainsville Elementary School
Pennsylvania	Williamsport	Williamsport Jr. High School
Pennsylvania	York	York Township Elementary School
Tennessee	Nashville	Gallatin High School
Texas	Austin	Casis School
Texas	Waco	Waco High School
Utah	Salt Lake City	West High School (Gymnasium)
Washington	Richland	Chief Joseph High School

and many, many other schools

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SEDGWICK vertical transportation equipment has been specified by three generations of architects — to move loads from floor to floor—to make better use of space — to give one-floor convenience in dwellings. Sedgwick safety, dependability and economy are the result of six decades of technical improvement.



CORRESPONDENCE LIFTS for high-speed transmission of letters, orders, other light loads. Also parcel lifts for heavier loads.

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RESIDENCE ELEVATORS often recommended by physicians. A basic consideration in remodeling older dwellings.

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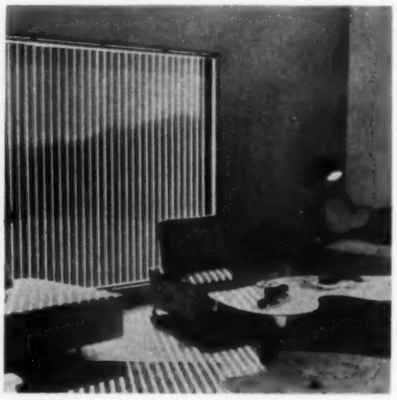
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142 W. 15th ST., NEW YORK 11, N. Y.

A-E PRODUCTS

(Continued from page 227)

DECORATIVE FABRIC PANEL FOR WINDOWS

Designed to take the place of blinds, draperies and curtains, *Vertical Fabric Panels* offer a new decorative treatment for windows and partitions. Available in a wide range of colors, the cloth panels are attached to hooks at the top and bottom of the frame, and are controlled by a concealed rod. When opened, the panels reportedly provide adequate ventilation and light without interfering with the view, and when closed they offer complete privacy. Because the panels are hung vertically, they stay clean for a long period of time, but they can be easily removed should the need arise, and may be washed by hand and rehung damp — with no ironing necessary. Sun Vertikal Blind Co., P. O. Box 112, Grand Rapids, Mich.



Vertical fabric panels soften glare and add decorative touch to room

STEPLADDER STOOL

A recent addition to the home furnishings market is a lightweight stepladder stool that is reported to support a weight of 1000 lb. The *Viko Nubian Steel Line* stool is delivered in simple knock-down construction — reducing freight and shipping charges — and can be easily assembled in a matter of minutes. Measuring 24 in. in height, the stool is made of tubular steel equipped with rubber "safety-tread" steps. The top is covered in wear-resistant vinylite, and is available in red, green, lime, gray, yellow and cocoa. T. Baumritter Co., 171 Madison Ave., New York, N. Y.

(Continued on page 236)

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Cleveland 15, Ohio, 1146 Hanna Bldg., Cherry 1-7214
Columbus 12, Ohio, 1384 Grandview Ave., Room 225, Kingswood 6444
Dallas 4, Texas, 3200 Maple Ave., Sterling 5186
Dayton 2, Ohio, 305 Eleven W. Monument Bldg., Hemlock 6344
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Humphrey & Hardenbergh, Inc., architects

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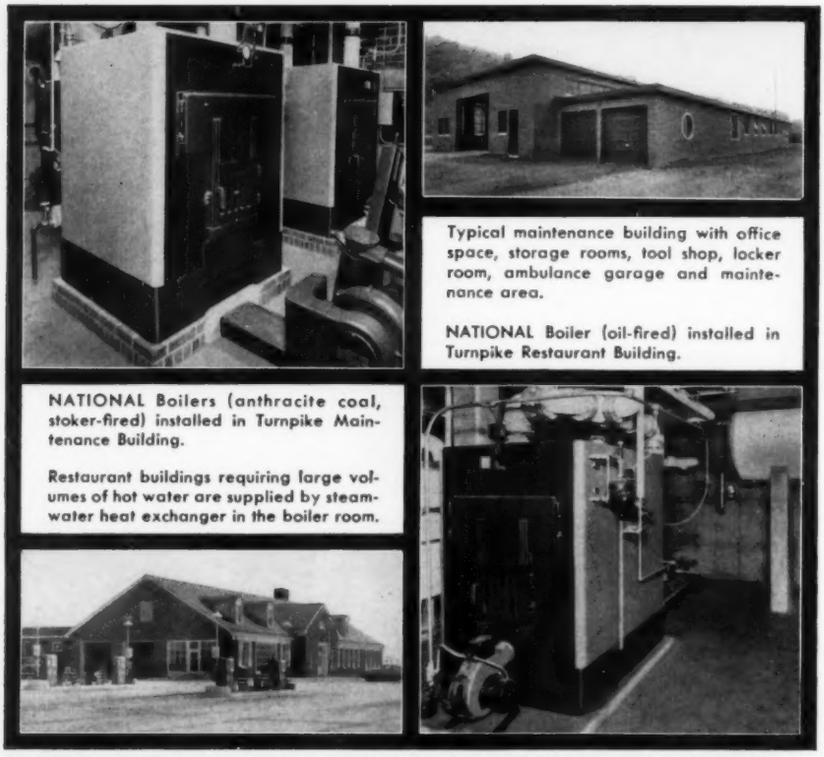
WHERE NATURE'S BEAUTY makes a perfect meeting with a well-planned interior setting, you'll find Andersen WINDOWALLS. In this home, Andersen Gliding Window Units, with transoms of Andersen Flexivent Windows, open the home to lovely wooded surroundings. Yet they place a transparent wall between the owner and uncomfortable weather. They are both windows and walls—the ideal meeting point for indoor and outdoor living.

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Typical maintenance building with office space, storage rooms, tool shop, locker room, ambulance garage and maintenance area.

NATIONAL Boiler (oil-fired) installed in Turnpike Restaurant Building.

NATIONAL Boilers (anthracite coal, stoker-fired) installed in Turnpike Maintenance Building.

Restaurant buildings requiring large volumes of hot water are supplied by steam-water heat exchanger in the boiler room.

PENNSYLVANIA TURNPIKE BUILDINGS comfortably heated round-the-clock by 36 NATIONAL (CAST IRON) HEAT EXTRACTOR BOILERS



Section of Pennsylvania Turnpike showing a maintenance building and area.

Architects: J. E. Greiner Company, Baltimore, Md. *Heating System Designers:* George & Hartman, Baltimore, Md.
Heating Contractors: W. L. Ramsey, Harrisburg, Pa.; J. J. Betke, Beaver Falls, Pa.; John Galbreath, Pittsburgh, Pa.

Heating comfort is assured in the restaurant, maintenance, utility and toll gate buildings on the famous 327-mile Pennsylvania Turnpike. Maintenance buildings are supplied with adequate heat to thaw cinders by the truckload. Abundant domestic hot water is also furnished by tankless water heaters for washrooms . . . and, in the restaurants, boilers heat water for dishwashing.

Heat Extractors along one stretch of the Turnpike are oil-fired . . . the others are anthracite coal, stoker-fired. Convectors, unit heaters and radiant panels are used for heat distribution.

Send for details about National Heat Extractor Boilers . . . sizes available for all applications—from small homes to large buildings.

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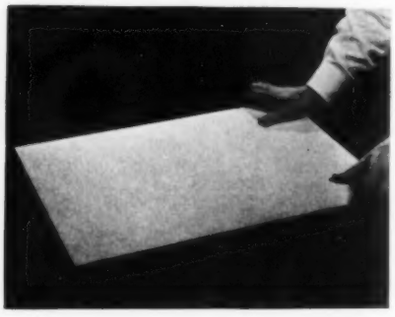
THE NATIONAL RADIATOR COMPANY
JOHNSTOWN, PENNSYLVANIA

A-E PRODUCTS

(Continued from page 232)

TERRACOTTA AND CERAMIC VENEER

A thin terracotta or ceramic veneer is now available from *Kraftile*. Three-eighths of an inch in thickness, the new product weighs 4 lbs or less per square foot and can be machine-made in dimensions up to 16 by 24 in. In addition to its thickness and light weight, other advantages cited for thin veneer include: ease of installation (it can be cut to fit



Light-weight ceramic veneer can be cut to fit easily at the site

by craftsmen on the job); reduced thickness of setting mortar (only $\frac{3}{8}$-in. joints are required); and ease of application to reinforced concrete, brick, cement blocks or to a scratch coat of cement plaster on wood studs (the same as a finish coat of stucco). The light weight, and on-the-job cutting of the material is expected to make it available to the entire country without adding excessive freight charges to the factory price. The reduced weight of the veneer and the setting mortar are said to have the additional advantages of requiring less steel in building. Kraftile Co., Niles, Calif.

WIRELESS INTERCOM SYSTEM

Talk-A-Phone Lc-33 is a new wireless two-station low-priced intercommunication system that requires no wired installations, and can be plugged into any electrical outlet. Featuring a "Sonic Gate," which provides noise-free communication by screening out hum and noise, the unit is designed for locations where instant or temporary installation is desired. Users can talk between offices, warehouses, plants or apartments, moving the units from place to place as needed, without any installation work.

(Continued on page 239)



IN MORE AND MORE SCHOOLS, IT'S EDWARDS!

Thousands of schools, coast to coast, run smoother, easier, thanks to Edwards.

In California, for example, 14 new schools recently joined the hundreds now using Edwards Automatic Clock and Program Control Systems.

Most recent was Menlo-Atherton High, an outstanding example of modern architecture. Among the others are College of Notre Dame, Belmont, Waverly School, Stockton, Frank Homan School, Fresno, and Brentwood School, East Palo Alto . . . all in California.



Edwards Automatic Clock and Program Control Systems are precision-built to give long, trouble-free service year after year. No mercury pendulums, rectifiers, condensers or troublesome radio tubes complicate their operation. The clock itself is handsome, functional . . . harmonizes perfectly with any type of architecture. Accurate sweep second hand, silent movement, no annoying tick each minute.

EDWARDS

protects . . everywhere!

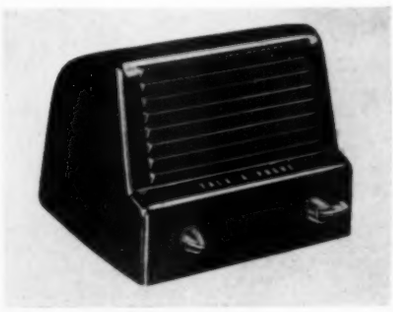


A-E-H PRODUCTS

(Continued from page 236)

The "Sonic Gate" circuit together with the Talk-A-Phone "squelch" is said to effectively suppress line noises and hum while the system is in actual operation, as well as when it is in stand-by position.

The unit is designed so that more stations can be added at any time to the system, all stations being able to receive messages transmitted from any point, thus providing needed communication where permanent installations may not be practical. It also features a device which provides dictation and supervisory control and does away with the need for operating any controls while dictating. This feature also is designed to meet the need for "listening in" on nursery or sick room by eliminating the necessity for any operation of controls. Talk-A-Phone Co., 1512 So. Pulaski Rd., Chicago, Ill.



Wireless unit provides intercom service for temporary installations

METAL FURNITURE

Designer Archie Kaplan has recently introduced some black expanded metal furniture with a new lightness of feeling. Designed to be used indoors or out, the line includes a 6-ft room divider with variated shelves to display china, glassware or objets d'art; a group of three nesting tables; a tea cart with rail handle and offset shelves; a new chair and matching bar stool in round wrought iron with vinyl covered cushion; a coffee table with a built-in shelf; and open cabinets for storing records, which also serve as small room dividers. New Dimensions Furniture, Inc., 26 W. 23rd St., New York 10, N. Y.

(Continued on page 242)

DESIGN UNLIMITED

with original

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TRANSLUCENT FIBER GLASS PANELS

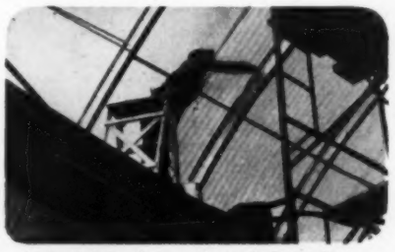
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homes...for skylights, window walls, patio roofs, awnings, shower stalls, etc. Ideal indoors and out.



commercial... for store fronts, office partitions, luminous ceilings, decorative effects, signs.



industrial...for unlimited daylighting ...skylights, side walls, etc. No framing needed.

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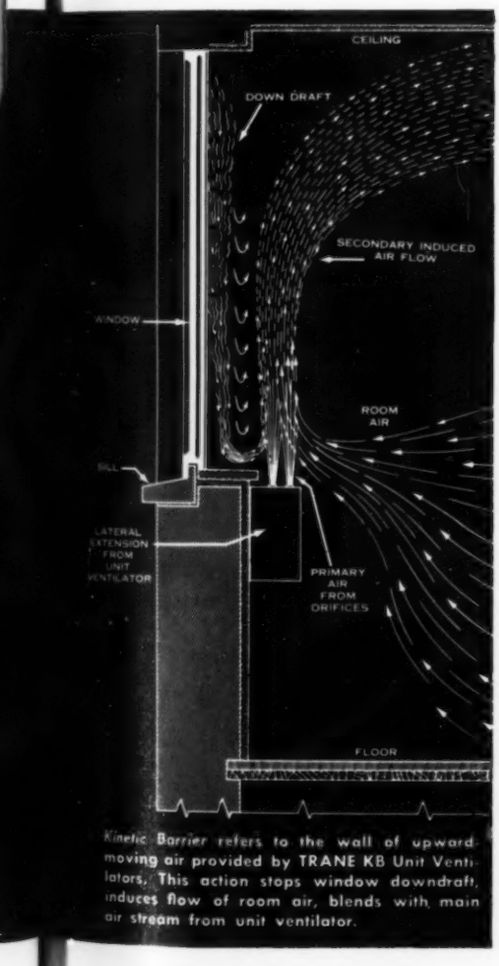
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or without shelving

The exclusive new TRANE

MANUFACTURING ENGINEERS OF AIR CONDITIONING, HEATING AND VENTILATING

drafts before they start!

New! Exclusive Trane Unit Ventilator System creates Kinetic Barrier which (1) stops window downdrafts every minute room is occupied, (2) improves distribution of heated and ventilated air, and (3) operates quietly —virtually noise-free.



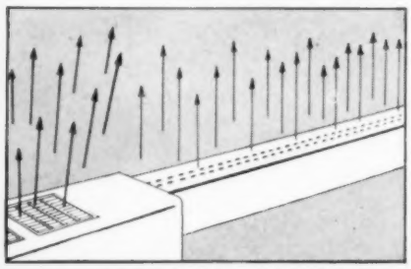
Kinetic Barrier refers to the wall of upward-moving air provided by TRANE KB Unit Ventilators. This action stops window downdraft, induces flow of room air, blends with main air stream from unit ventilator.

Not since the first unit ventilator has there been such a significant improvement in school comfort.

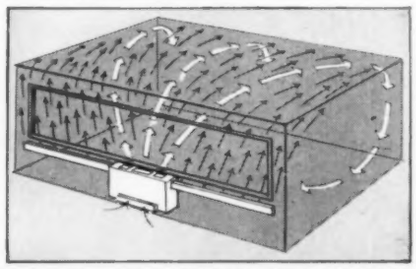
The new TRANE Unit Ventilator System actually accomplishes what architects, engineers, contractors and school authorities have long agreed would be the ideal.

How Trane System differs. The use of *warmed* air for intermittent "blanketing" of windows during the heating cycle has been common practice for many years. However, this still leaves pupils exposed to downdrafts since *cooling* is required about 75% of the time due to high heat gains. The new TRANE system differs in that it is effective *at all times*—during cooling as well as heating cycles. *It operates every minute the room is occupied . . . even when the heat is off.*

HOW TRANE *Kinetic Barrier* SYSTEM WORKS



Outdoor and room air is drawn into the TRANE Unit Ventilator in desired proportions where it is blended, filtered and brought to the proper temperature. It is then *forced upward* from the central unit and from lateral extensions along the entire window wall.



Rising air creates *Kinetic Barrier* which blocks drafts at source, draws room air to ceiling. These air streams blend and circulate around room in a continuous draft-free cycle. Air fans out from central unit, assists air from extensions to penetrate every corner.

Report describes new system in detail. Just published. Contains results of an investigation of the TRANE *Kinetic Barrier* System of unit ventilation operating in an actual "problem" classroom during the winter of 1952. If you are concerned with modern schoolroom heating and ventilation, this report is "must" reading. Call your TRANE sales office for a copy today.

Trane matched products fit every school need . . . Convectors • Wall-Fin Heaters • Volume Ventilators • Projection Heaters • Horizontal Unit Heaters • Force-Flo Heaters • Climate Changers • Compressors • Air Conditioners • Water Chillers • Fans • Coils • Traps and Valves.

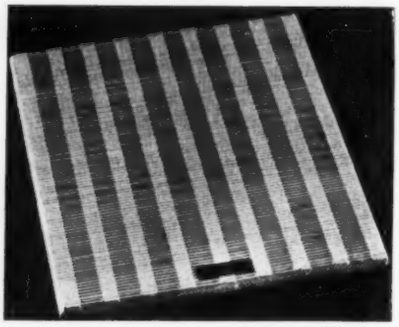
Kinetic Barrier system of Unit Ventilation

EQUIPMENT • The Trane Company, La Crosse, Wis. • East. Mfg. Div., Scranton, Penn. • Trane Co. of Canada, Ltd., Toronto • 87 U. S. and 14 Canadian Offices.

(Continued from page 239)

DECORATIVE APPLICATIONS WITH ACOUSTICAL TILE

A new acoustical tile called *Tropi-Tile* is made from fibrous glass bonded into board form and is surfaced with woven wood, available in a variety of patterns and in a wide color range. The tiles are made in sizes of 12- by 12-in., 12- by 24-in., 24- by 24-in., 24- by 48-in. and 48- by 48-in., in widths from ½ to 1¼ in. They are available in natural or



Acoustical tile from fibrous glass

.24 stock colors; custom matching of clients' color choices may be obtained as well. Installation is reported to present no problems — the tile being suited to suspended ceiling constructions or application with adhesives. Kerfing may be done at the factory or on the job for mechanical application. Aside from the acoustical value of the fibrous glass material, the attractive woven wood surfaces add beauty and distinction to rooms — in offices, restaurants, public rooms of almost any type, as well as private residences. Tropicraft of San Francisco, 14 Sherwood Pl., San Francisco 3, Calif.

SHEER DECORATIVE FABRIC

A new addition to the line of Golding decorative fabrics, is "*Pyrenees Cloth*," a sheer weave loomed from 26 per cent Pakistan goats' hair, 50 per cent cotton, and 14 per cent viscose. The cloth has a soft-toned translucent texture with a shadowy striated effect, that reportedly does not shrink, will not wrinkle and sheds dust. The fabric has weight and body and a certain crispness to the touch. It comes in six plain pastel colors, 50 in. wide: rose, dust, light blue, green, beige, gold and gray. It has also been used for two of the manufacturer's hand-screened prints: "Marakesh," a modernized architectural design; and "Botanical," a wide-spaced leaf pattern with bright flowers, designed by Tammis Keefe. Golding Decorative Fabrics, 470 Fourth Ave., New York 16, N. Y.

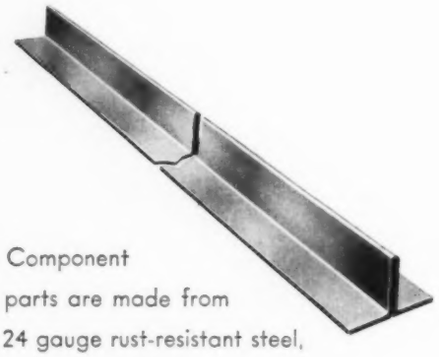
PHOTOCOPIES IN COLORS

A new process for making photocopies in any color has been developed by the manufacturer of the *Apeco Systematic Auto-Stat* office photocopy machine. The color copying process has been developed to meet the growing demand by business to be able to color-code copies for fast visual separation. To make colored photocopies with the manufacturer's present equipment no additional equipment is used. The procedure is the same as for regular black and white copies, and copies can be made in less than a minute, in only two steps. There is no time-consuming drying. The process is said to do away completely with chemical trays, running water, wet hands and fumes. The equipment is described as simple to operate and requires no special set-up — it is ready for automatic operation when plugged in. The American Photocopy Equipment Co., 2849 No. Clark St., Chicago 14, Ill.

(Continued on page 246)

the

..Quality mechanical suspension system for the installation of acoustical units is Securitee.



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water cooler engineering data, contained in our Architect's Kit, is a competent investment guide, enabling you to choose exactly the right model and type for any project; and your Westinghouse Water Cooler Specialist is a capable counselor on water cooler matters. For quick reference, we also suggest you consult your Sweet's File, Section 28c/WE.

investments in Westinghouse Water Coolers are conservative, adequately protected against depreciation and certain of long-time dividends in fine performance. For more details, and for planning assistance, call your nearby distributor or write Westinghouse Electric Corporation, 653 Page Boulevard, Springfield 2, Massachusetts.

For sound investments in any electrical product—

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WESTINGHOUSE ELECTRIC CORPORATION

Electric Appliance Division • Springfield 2, Mass.



(Continued from page 242)

CHAIRS AND STORAGE UNITS

New additions by Charles Eames to the *Herman Miller* furniture line include two new chairs and a revised system of storage units. Eames' first plastic side chair is a counterpart of the plastic armchair introduced several years ago. The new side chair is described as lightweight, comfortable and easy to keep clean. Because of its weather resistant plastic shell and choice of metal bases, it may be used out-of-doors. Designed as an all-purpose chair, it can also be used as a desk chair, a dining chair, or a rumpus room chair. The molded shell of the new chair is, like that of its armchair predecessor, made of polyester resins, reinforced with glass fibers, and has a shaped one-piece seat and back. The shell is offered in a choice of three colors: elephant hide gray, seafoam green and greige, and is available with any of three bases: a strut base of dining and desk height, executed in polished chrome; and two chrome rod bases, one of desk height and another of a slightly lower height, for occasional seating.



Molded plastic shell chair is fitted with upholstered foam rubber

The new upholstered chair is composed of a continuous shell of molded plastic, to which an upholstered, molded foam rubber pad has been fitted. It is offered in a choice of seven different bases, which adapt the basic design to different seating requirements.

The complete and augmented E.S.U. storage and desk system now includes 18 modern desks and storage units, combining wood, chrome-plated steel and colored panels. The line offers storage units in two widths (24 and 47 in.) and three heights (20⅝, 30⅝, and a high 58⅝-in. room divider height.) Standardization of the case dimensions makes it possible to use the units separately or arrange them in storage rows. The two new E.S.U. desks are 29½ in. high. Each desk has two standard-size file drawers, with stops to prevent their being pulled too far out. One drawer contains a sliding pencil tray and a "well" for incidental office supplies, while the other is available with a convenient letter file. Both desks have polished chrome legs and footbar. In one desk (#D-30) a typing counter with drawer and shelf space forms an "L" with the main unit. Herman Miller Furniture Co., Zeeland, Mich.

AUTOMATIC SYSTEM FOR INTERCOMMUNICATION

A new and complete line of intercommunicating systems is now being distributed by the Connecticut Telephone and Electric Corp. The new line of automatic switchboards and telephones is described as the most complete the company has ever offered. It will provide intercommunication facilities for businesses needing as little as two telephones.

(Continued on page 250)

That modern touch

RESOLITE



Shade from the sun, but with bright daylight inside — that's why Resolite translucent structural panels are bringing the modern home closer to the outdoors. Resolite is better for skylighting because it filters out much of the heat, gives a soft, restful daylighted interior, as in this weather-tight, Resolite-roofed patio of a Florida residence.

Resolite is a rugged structural sheet of Fiberglas-reinforced resin plastic, flat or corrugated for added structural strength. The material is unaffected by weather extremes of heat, cold or moisture. It will not rust, oxidize, mildew or rot. It is simple to apply with screws or nails and with ordinary tools and skill; it is easily adapted to roof, wall or partition.

A wide variety of color and corrugation patterns lends Resolite easily to endless possibilities in interior or exterior decoration.



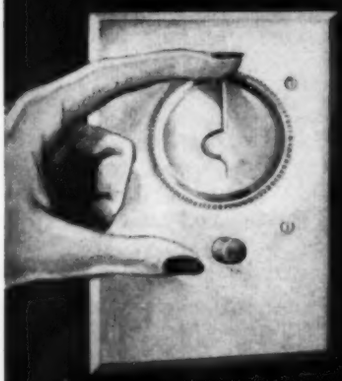
Beautifying the interior or exterior by either reflected or transmitted light, Resolite panels are ideal for decorative and utility partitions, with a selection of color for any motif. The effect of length and height is enhanced by utilizing the corrugation patterns.

For complete information, and name of nearest distributor, write Dept. A-4

RESOLITE Corporation
ZELIENOPLE, PA.

LIGHT...

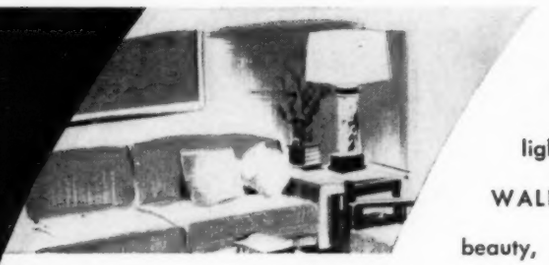
just right for any occasion



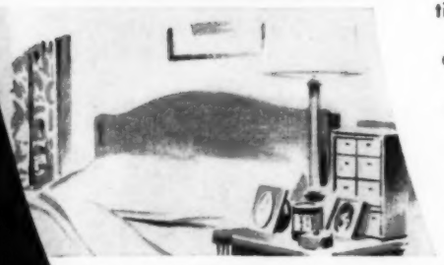
with the **powerstat** Wallbox Dimmer

- Any amount of light from darkness to full brightness
- Use in place of ordinary on-off wallswitch
- Cool, smooth, flickerless silent operation
- Dims any number of lamps up to 360 watts at 120 volts, A-C
- Easy to install
- Underwriters' Laboratories Approved

THE SUPERIOR ELECTRIC CO.
BRISTOL, CONNECTICUT













Now, a new concept in light control... the **powerstat** WALLBOX Dimmer offers the beauty, comfort, convenience and versatility of *controlled light* for every room in the home.

By simply turning a knob, any amount of light can be selected — to provide the correct light for every occasion and activity . . . subtle and flattering light for entertaining, bright light for reading and sewing in the living room . . . bright light for table arranging, candle glow for dining in the dining room . . . bright light for reading, lower light for dressing and night light in the bedroom . . . bright light for working, intermediate for serving in the kitchen . . . bright light for safe illumination, lower for night light in hallways and bathroom . . . bright light for games and cards, lower for conversation, television or movies in the recreation room.

Learn more about ***controlled light*** write to:

THE SUPERIOR ELECTRIC CO.
13093 Demers Avenue, Bristol, Conn.

NAME _____
POSITION _____
COMPANY _____
CO. ADDRESS _____
CITY _____ ***ZONE*** ____ ***STATE*** _____





When they ask . . .

"WHO WAS THE ARCHITECT ON THIS JOB?"

he can step forward with pride

This flooring is Wright Rubber Tile. It will need no apology ten years from today . . . *or one hundred years from today!* For Wright Rubber Tile far surpasses conventional tile for long life and lasting beauty.

Through the years, a Wright Rubber Tile floor will bear witness to your sound judgment in having specified it. It will bring your client lasting satisfaction. It will confirm your own good reputation.

Economical—Because of its exceptional durability, cost per year of Wright Rubber Tile is less even than inferior floor covering.

Versatile—Because of its high resistance to damage, Wright Rubber Tile is ideal for all types of construction, industrial, commercial and residential. Twenty-three decorator colors to choose from.

Easily Maintained—All floors require maintenance, but Wright Rubber Tile requires *less* than any other.

We invite you to compare Wright Rubber Tile with any floor covering on the market. Send for a free sample. Then specify Wright Rubber Tile with complete confidence.

WRIGHT MANUFACTURING CO.
5205 Post Oak Rd., Houston 5, Texas

WRIGHT RUBBER TILE

FLOORS OF DISTINCTION

- WRIGHTEX — Soft Rubber Tile
- WRIGHTFLOR — Hard Surface Rubber Tile
- WRIGHT-ON-TOP Compression Cove Base
- WRIGHT VINYL TILE

A-E PRODUCTS

(Continued from page 246)

to companies requiring thousands of telephone lines. The *Private Line* system ranges in scope from a 10-line automatic system to a 50-line automatic system which can be expanded easily and economically to well over 5000 lines. Another low cost two- to five-line system designed for professional offices or small businesses is also being produced. Called the *Connecticut Direct-A-Call*, this system can be installed by the purchaser himself. Design and construction of the completely automatic private line systems is also reported to enable exceptionally simplified installation and maintenance.

The telephone for both systems will be made of a special super-tough "Hercocel" plastic, molded in an attractive color to harmonize with office surroundings. Among other service features included in the private line systems are: executive priority, voice paging, conference facilities, group hunting, and automatic ringing.

In addition to the complete line of intercommunication equipment, the manufacturer will continue to produce an extensive line of hospital signaling equipment. Connecticut Telephone and Electric Corp., Meriden, Conn.

LAMINATED PLASTIC BUILDING MATERIAL

A new plastic material, *Nevamar*, has been introduced by the manufacturers of "Saran." Suitable for applications in the kitchen, bathroom, for doors and panels, lunch counters, dining tables and store fixtures, the material is said to be tough, hard and non-porous. Besides a wide choice of solid colors and novelty patterns, it is available in such wood grains as knotty pine, straight grain oak, maple and mahogany in both bleached and stained colors. The 48- by 96-in. sheets are 1/16 in. thick, and come sanded and ready to apply. Although designed to be used with a plywood base, they may be adhered to smooth wood or metal surfaces of existing units of furniture with new pressure sensitive adhesives. Reported to be resistant to heat, cigarette burns and to ordinary household stains, the plastic may be cleaned with a damp cloth and reportedly never needs painting or re-finishing. National Plastics Products Co., Odenton, Md.

(Continued on page 254)

How Pittsburgh Glass figures in present-day architecture





IN ALL KINDS of commercial structures, the use of Pittsburgh Plate Glass enhances the over-all attractiveness of the design. This automobile showroom in Brooklyn, New York, is an excellent example of the integration of large areas of glass to create an open-vision front of immediate appeal. Here, three big Twindow show windows are ingeniously contrived so that, at the touch of a switch, they descend into a slot in the floor. This permits the quick movement of cars from the showroom to the street. Vita Automatic Windows, Inc., Woodside, L. I., New York. Nathan R. Ginsburg, A.I.A., Architect, New York City.

SOLEX–TWINDOW units, as shown in this sectional view, consist of two panes of glass. The outer is green-tint Solex . . . the inner is clear Plate Glass. Between them is a sealed-in air space. A stainless steel frame protects the seal and glass edges, makes handling safe and easy. These units offer the dual advantages of Pittsburgh's Twindow —"the window with built-in insulation"—and the heat-absorbing, glare-reducing properties of Solex—"the best glass under the sun!"

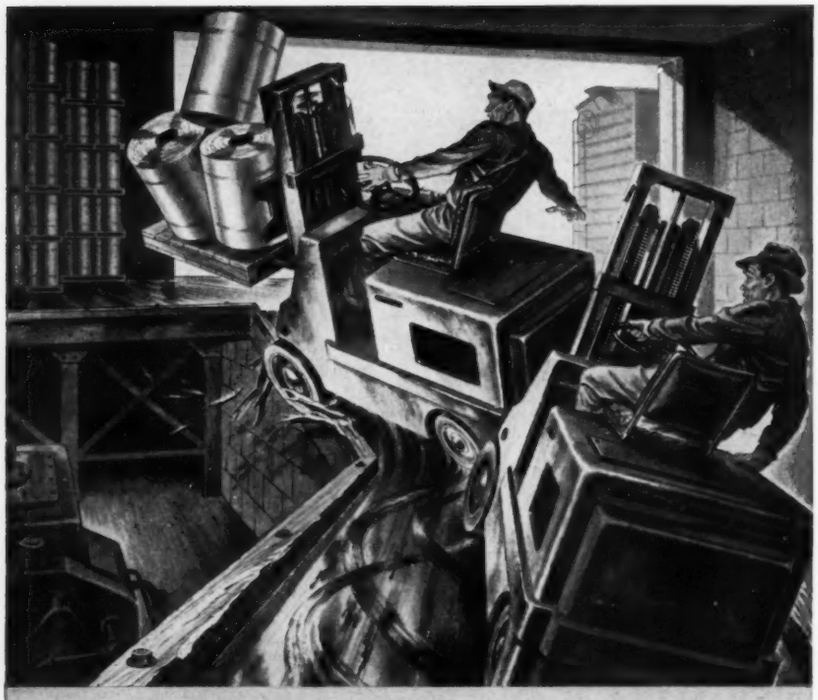
Design it better with **Pittsburgh Glass**

Your Sweet's Catalog File contains detailed information on all Pittsburgh Plate Glass Company products . . . Sections 7a, 13e, 15b, 16d, 21.

PAINTS · GLASS · CHEMICALS · BRUSHES · PLASTICS · FIBER GLASS

PITTSBURGH PLATE GLASS COMPANY

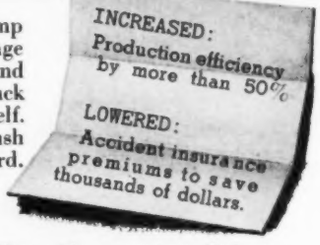
IN CANADA: CANADIAN PITTSBURGH INDUSTRIES LIMITED



. . . THEN WE INSTALLED ALGRIP
Thus Doubling Production Efficiency
And Lowering Big Insurance Costs



In a large Eastern rolling mill, a ramp from the production floor to a storage area above was so slippery from oil and grease drippings that a fork-lift truck could not climb the incline by itself. An unloaded fork-lift truck had to push the loaded one. Already a safety hazard, the slippery ramp also caused production inefficiency.



When A.W. ALGRIP Abrasive Rolled Steel Floor Plate was installed on the ramp, skidding stopped, accidents were eliminated, and one truck did the job better than two did before. *Greater production efficiency and lowered insurance rates paid for the ALGRIP installation.* Safe for vehicles as well as men, ALGRIP gives even steep inclines a hard-gripping, anti-skid surface.

In ALGRIP, tough abrasive particles (the same as used in grinding wheels) put hundreds of tiny safety brakes in every footstep—making it virtually impossible to slip. ALGRIP never wears smooth—heavy use only exposes new abrasive particles. The tough rolled steel in ALGRIP makes this floor plate stronger than other abrasive floorings. For safety that pays for itself, get the complete ALGRIP story by writing today for our new Booklet AL-21—without obligation.

At your request, an Alan Wood Steel Company safety engineer will call on you to show you how ALGRIP can be profitably used in your plant to lower insurance rates, raise production, and eliminate accidents.

Over 125 Years of Iron and Steel Making Experience



ALGRIP Abrasive Rolled Steel Floor Plate
ALAN WOOD STEEL COMPANY
CONSHOHOCKEN, PA.
Other Products: A. W. SUPER-DIAMOND Floor Plate • Plates • Sheet • Strip
(Alloy and Special Grades)

A-E PRODUCTS

(Continued from page 250)

SINK SPRAY FOR DISHWASHING

A new *Dish-Wash Spray* is being supplied as optional equipment on sink fittings for both roll rim and flat rim "Briggs" porcelain enameled steel sinks. The spray is an integral spray-detergent washing unit. It is attached by a hose under the sink to the sink fitting, while the spray unit itself sits in a holder on the sink ledge. When the spray is in use, the hose pulls out through the holder to any convenient length desired. After

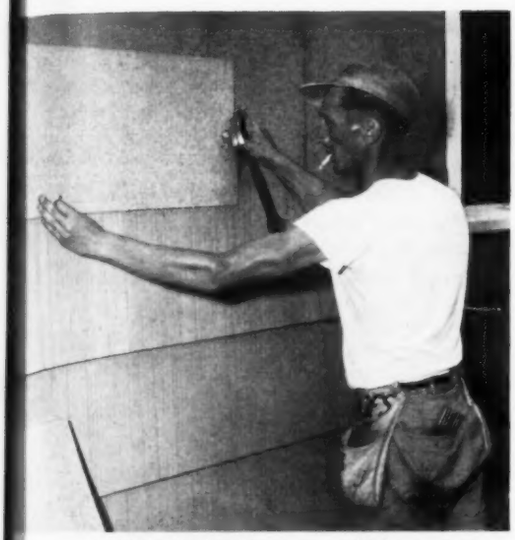


Dish-wash spray has finger-tip control and retracts under sink

dishes are washed, the hose retracts under the sink, and is entirely out of sight when not in use. The body of the new unit, which also serves as the handle, is made of Bakelite to insulate against the hottest water, and is approximately 5 in. long. It has separate controls for spray and detergent, and both controls reportedly can be operated easily with one hand while the dishes are being washed and rinsed. The user has finger-tip choice of aerated detergent suds for washing or clear aerated water for rinsing. The brush-spray head of the unit is a hard rubber disk with a friction type nylon brush, and may be adjusted for the convenience of the user. Liquid detergent is contained in a small cup attached to the body or handle of the unit, and can be easily detached for filling. One detergent filling is said to be sufficient for numerous washings. Briggs Mfg. Co., Plumbing Ware Div., 3001 Miller Ave., Detroit 11, Mich.

(Continued on page 258)

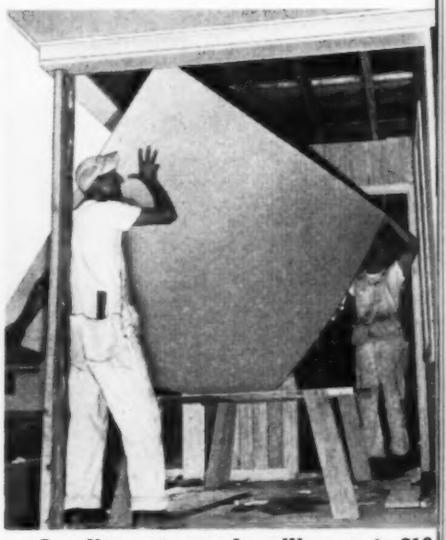
with Insulite
$71 per home



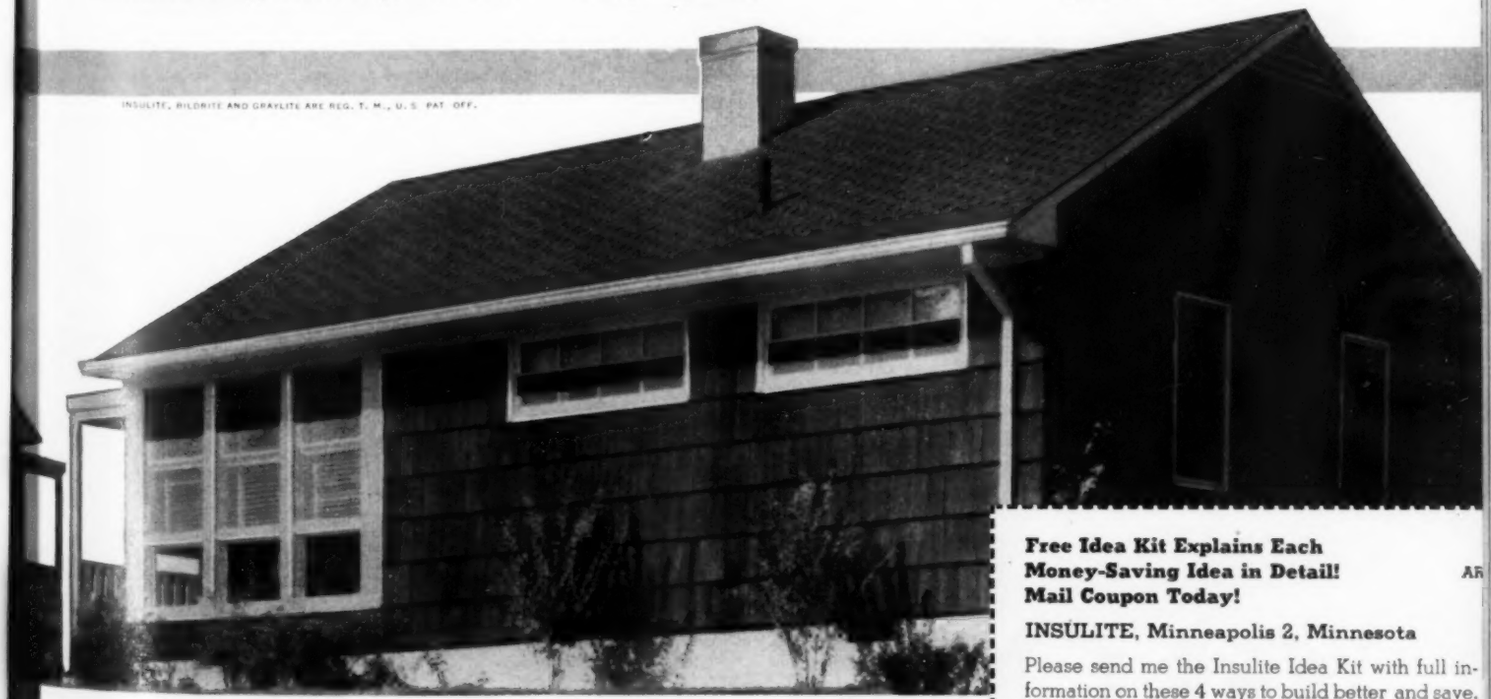
2. Shingle-Backer saves $23 per home. Compared with No. 3 under-course shingles formerly used, Shingle-Backer reduced application time on the Rockcrest project 14 man-hours per home by actual time-study tests. At the same time, Shingle-Backer increases insulation value, produces deep, shadow-line



3. Primed Graylite soffits save $11 per home, compared with exterior plywood formerly used for this 16″ overhang. Made of the same material as tough, weather-resistant Bildrite, Primed Graylite is primed at the factory. It's easy to cut, easy to handle, easy to nail and takes paint perfectly.



4. Insulite cuts porch ceiling costs $16 per home. One 6′ x 9′ sheet of Insulite Building Board covers this ceiling in a single operation. Costs $16 less applied than 1″ x 4″ beaded ceiling formerly used. One coat of rubber base paint covers it handsomely. Cove molding is applied around the edges.



INSULITE, BILDRITE AND GRAYLITE ARE REG. T. M., U. S. PAT. OFF.

Build and insulate with double-duty

INSULITE

Made of hardy Northern wood

INSULITE DIVISION, Minnesota and Ontario Paper Company, Minneapolis 2, Minnesota

Free Idea Kit Explains Each Money-Saving Idea in Detail! Mail Coupon Today! AR

INSULITE, Minneapolis 2, Minnesota

Please send me the Insulite Idea Kit with full information on these 4 ways to build better and save.

1. How to cut sheathing costs with Bildrite.
2. How Shingle-Backer cuts under-course time.
3. How Primed Graylite cuts soffit costs.
4. How to cut porch ceiling costs with Insulite.

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Firm _____

Address _____

City _____ *State* _____

Another Globe Elevator!

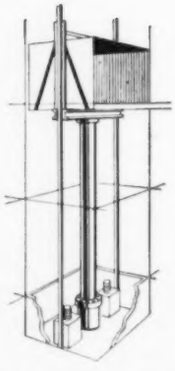
America's Most Economical Elevator to Install, Operate, and maintain for
APARTMENTS
FACTORIES
HOSPITALS
✓ RESTAURANTS
STORES
WAREHOUSES



In one of the busiest units of a famous restaurant chain, this Globe OiLIFT Freight Elevator speeds the transfer of food and restaurant supplies from street to basement. It eliminates the need for carrying heavy loads up and down dangerous ramps and stairways.

In a Globe OiLIFT Elevator, ascent is powered by an oil-operated cylinder. Descent is by gravity controlled through the hydraulic mechanism. Installation and operation costs are low. And maintenance costs are so much less than those of cable types that the owner of a Globe OiLIFT Elevator will more than save the original cost over a period of 30 years.

Globe OiLIFT Elevators are assembled to meet your specifications. Send today for the new Globe OiLIFT Elevator Catalog AR-515.



The OiLIFT principle eliminates expensive penthouse construction and load-bearing shaftway walls.

GLOBE
THE BEST LIFT

GLOBE HOIST COMPANY • 1000 E. Mermaid Lane, Philadelphia 18, Pa.
(Factories at Des Moines, Iowa and Philadelphia, Pa.)

AEH PRODUCTS

(Continued from page 254)

NEW FURNITURE COLLECTION FOR INFORMAL LIVING

A new collection of living, dining and bedroom pieces designed by Maurizio Tempestini for the *Salterini* line is described as combining beauty with informality and versatility. Made of wrought iron, the pieces also combine this material with brass and leather. One of the most versatile of the new units is a room divider which consists of two pieces: a TV unit and a bar or server. Each of the units measures 72 in. in height and 36 in. in width. Shelves are



Architect-designed chair combines wrought iron with natural cane

walnut, and are adjustable. On the server side marble is used for the serving shelf and a removable wicker basket has been added for glasses. The second half has a swivel unit on which a TV set rests, making it possible to view from either living or dining room. Below is a place for radio, phonograph and record albums. The swivel section may be replaced by a desk unit, if desired. Polished brass tips are used on the legs of the piece.

Beds in the Salterini collection feature cane headboards and swivel trays for bed service which swing in front of the user by means of an eccentric unit. For overnight guests where there is no spare room, an extra-long sofa becomes a comfortable bed. An oversized coffee table, higher than conventional, was especially created for service of casserole or "fork foods." John B. Salterini Co., Inc., 510 E. 72nd St., New York, N. Y.

(Continued on page 262)



The "Derbies" go on...

3 Ceiling and lighting installation complete, the Derby Downlights are turned on. "Derbies" alone account for about 20 footcandles of illumination. Warm incandescent light of "Derbies" gives installation sparkle and brilliance. Teamed with MOBILEX, "Derbies" produce color balanced lighting for accurate appraisal.



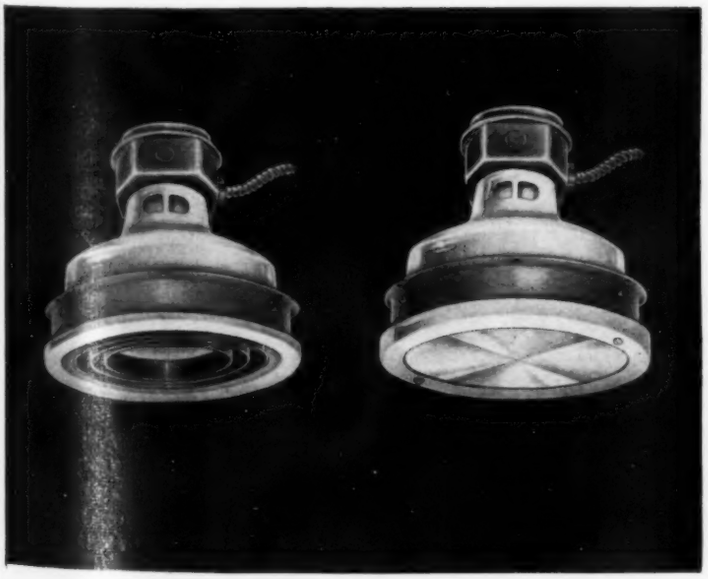
MOBILEX® goes on...

4 A flick of the switch and MOBILEX goes to work. Light meter reading for full installation measures 140 footcandles. Visibility excellent in every corner of store. Comfort extremely good. No glare. No harsh shadows. Recessed MOBILEX leaves ceiling plane smooth, unbroken. Rectangular patterns achieve good design.

economy to produce good lighting

about a new Day-Brite installation in Boyd's Men's Store, Clayton, Mo.

367



Versatile Derby Downlights...

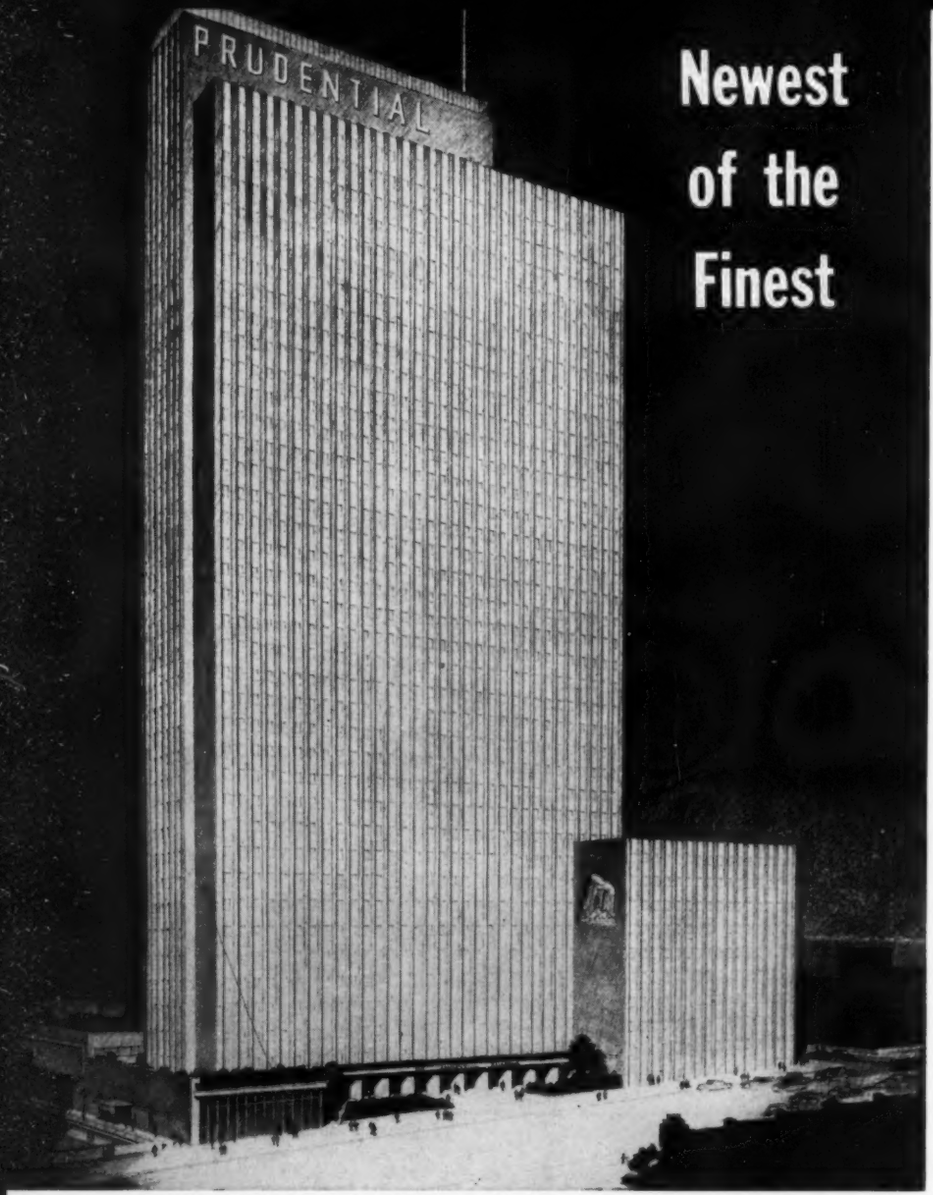
7 Inexpensive recessing downlights. Available with removable louver or with 6¾" diameter Holophane Controlens* mounted in removable frame. Special adapter faces available for pin-hole downlighting and other decorative effects. Ideal units for mixing incandescent and fluorescent illumination. UL approved.

*® Holophane Co., Inc.

"DECIDEDLY BETTER"
DAY-BRITE®
Lighting Fixtures

The Name on the Fixtures...

8 The Day-Brite name is more than a promise of value. It's a *guarantee* of the most for your money by the nation's largest exclusive manufacturer of lighting fixtures. For catalog or information, write Day-Brite Lighting, Inc., 5465 Bulwer Ave., St. Louis 7, Mo. In Canada: Amalgamated Electric Corp., Ltd., Toronto 6, Ontario.



Newest of the Finest

Prudential Building, Chicago • Naess & Murphy, Architects • Geo. A. Fuller Co., Contractors

The new Prudential Building will soon rise 600 feet above the shore of Lake Michigan, and become a distinguished addition to Chicago's skyline. This mid-America headquarters of the Prudential Insurance Company will contain more space than any other office building in America's second largest city.

As a building, it will take its place among our country's finest structures and is a perfect example of the features a well-informed investor is willing to put into the space he plans to use and rent. For instance, to prevent future obsolescence and to meet the increasing requirements of modern electronic office equipment, architects Naess & Murphy have prepared the new Prudential Building to handle the highest electrical load of any office building yet built. To do this job easily, and to permit layout changes and additions at minimum cost, Robertson Q-Floor construction is being used. This strong, light-weight, steel, cellular structural floor is the only construction material available which provides easy electrical access over every 6-inch area of the entire exposed floor. For more good reasons why fine new buildings all over America have turned to Robertson Q-Floor construction, see the opposite page.

Robertson

Q-Floor

a product of **H. H. Robertson Company**

2404 Farmers Bank Building • Pittsburgh 22, Pa.

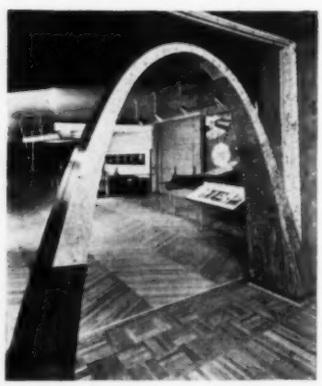
Offices in All Principal Cities **World-Wide Building Service**

A-E PRODUCTS

(Continued from page 258)

HARDWOODS EXHIBIT

The Museum of Science and Industry in Chicago has recently opened a permanent exhibit on *A World of Hardwoods*, sponsored by voluntary contributions from all branches of the hardwood industry. Included in the exhibit are a music-living room designed by William Pahlmann, a one-room apartment designed by *Living for Young Homemakers*, a family kitchen-hobby room designed by Jules Marling, Chicago architect, and an Office of Tomorrow designed by Henry Glass. Each of the rooms contains hardwood of one or more kinds,



Permanent hardwood exhibit shows woods used in a variety of ways

used in a variety of ways. Flooring, paneling, built-ins and furniture comprise the majority of uses displayed. Acoustical properties of hardwoods are demonstrated with musical instruments and appliances. The exhibit tells the complete story of hardwoods from the living tree to finished products. The Museum of Science and Industry, Chicago, Ill.

ADJUSTABLE POST-SHORE

A new *Universal* post-shore reportedly offers an exclusive feature that eliminates the necessity of stocking extra shores with special heads to meet varying shoring requirements. Standard 6 by 6 Heads are easily converted to either "T" or "J" Heads on the job, quickly, and without the use of special tools. Simplified design of the post-shore permits erection in two operations: the telescoping upper member is positioned at the nearest height needed for rough adjustment (positions are located every 3

in.); then the collar-sleeve is turned to raise shore to the exact height required. This protected vernier adjustment need not exceed 3 in. — is said to save considerable time in erection. Post-shore is comparatively light in weight and its compact design permits one-man-erection and exceptional ease in handling and transporting.

The device is fully tested, with known load capacities to assure maximum safety, and will shore slabs from 6 to 15½ ft. Three models are immediately available: APS-610 (6 to 10 ft,) APS-813 (8 to 13 ft) and APS-1015 (10 to 15½ ft). All models include a standard scab plate welded to the base member. The post-shore also can be adapted, with optional equipment, for use with the manufacturer's "Eze-bilt" steel-panel scaffolding for shoring; laterally braced; or extended in height as much as 3 ft on each model. Universal Mfg. Corp., Zelienople, Pa.

GAS-FIRED FURNACES

A complete series of special design reverse- or counter-flow models has been added to the *Sequoia* line of gas-fired furnaces. Three sizes most frequently required for residential perimeter heating installations are in production — 80, 100 and 120,000 Btu.

To be distributed nationally under the trade style of "Rev-flo," the new furnace incorporates the same unique over-all dimensions first introduced in the manufacturer's "Closet'eer" upright series. These reverse usual upright furnace physical features by increasing width to a full 28½ in., but maintaining extremely shallow depth. Height is normal.

Two major advantages are claimed for these unusual dimensions. All connection points position on the face of the unit for simple, rapid installation. The shallow depth reportedly makes possible installing the furnace in normal-size linen closet or wall alcove openings — so that when placed in a common bedroom wall, wardrobe closet area decreases are not necessary. In regular closets, the shallow depth (16 to 24 in.) and minimum AGA-approved clearances leave considerable general storage space. Sequoia Mfg. Co., 1012 Brittan Ave., San Carlos, Calif.

(Continued on page 268)

Why the Finest New Buildings Have Q-Floor



Beyond the fact that Q-Floor offers the greatest electrical availability of any structural floor in existence (as indicated in the above illustration), there are several other vital reasons why it has become a part of the finest new buildings in America.

Q-Floor saves construction time and money. The steel cellular units come on the job cut to fit so that two men can lay 50 square feet in one minute. In the case of the U. S. Steel-Mellon Bank Building in Pittsburgh, forty floors were installed in four months. Because Q-Floor provides a perfect platform for work and storage, 1,000 men were able to operate on the job without interfering with each other. Q-Floor saves steel as a result of its favorable ratio of weight to strength. Footings and structural steel can be lighter than with ordinary construction. Moreover, Q-Floor saves drafting room time since completely predetermined wiring and mechanical layouts are not necessary. Because no combustible forms and shoring are required, there has never been a construction fire on a Q-Floor job. Add these features to low cost on wiring changes in the years to come, and it's easy to see why Q-Floors are a feature of America's finest new buildings.

The Robertson Technical Library contains data books on Q-Floor which should be part of every architectural and engineering library. Write to us.

Robertson

Q-Floor

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2404 Farmers Bank Building • Pittsburgh 22, Pa.

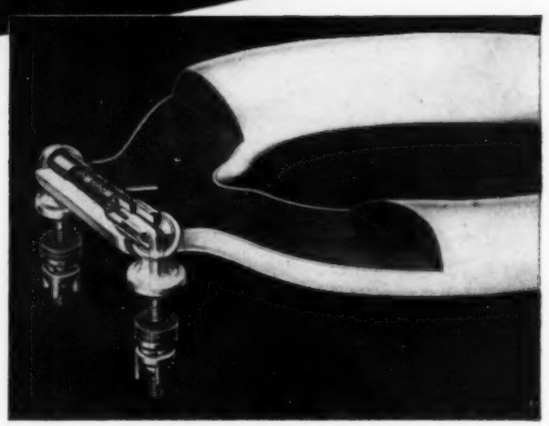
In Canada: Robertson-Irwin Ltd., Hamilton, Ontario

In England: Robertson Thain Ltd., Ellesmere Port, Cheshire

Where **Strength** *is called for*



No. 395
Church COREX Seat
in black or white



Heavy brass insert imbedded continuously across back and locked into molded core, absorbs any stress, strain or shock.

Especially for schools, hospitals, factories and other industrial and institutional installations — specify COREX® Seats.

COREX is a special composition, molded by tons of pressure over a core of hardwood fibrous chips, into a homogeneous unit whose toughness and resilience is matched only by the lustrous beauty of its practically indestructible finish.

The first cost is the last cost. It never needs replacing.



CHURCH PLASTIC WALL TILE

A quality plastic wall tile, ideal for multi-unit or single family dwellings; for hotels, schools, factories, institutions; for new construction or remodeling. Needs no expensive supporting constructions — weighs only 8 oz. per square foot. Four styles and 25 colors to choose from. Write Architects Service Dept. 4 for descriptive literature and sample tiles.

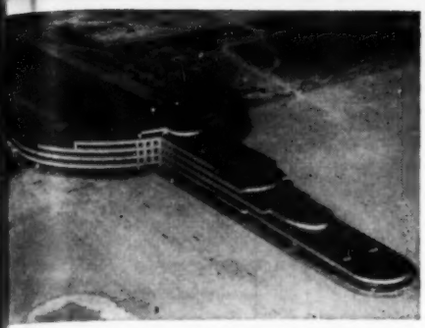
Church Seats

"THE BEST SEAT IN THE HOUSE"®

C. F. CHURCH MFG. CO., HOLYOKE, MASS.
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Serving home and industry

AMERICAN-STANDARD · AMERICAN BLOWER · CHURCH SEATS & WALL TILE · DETROIT CONTROLS · KEWANEE BOILERS · ROSS EXCHANGERS · SUNBEAM AIR CONDITIONERS



Huge Terminal Building at World's 2nd Largest Airport

By AMERICAN BRIDGE





Interesting Facts

Airfield is 2nd Largest in World.

Terminal Building is Largest in World.

The terminal building provides facilities of a small city, including a 62-room hotel, a restaurant to accommodate 3000, numerous shops.

Designed by: Allegheny County Department of Aviation.

Owner and Operator: Allegheny County Department of Aviation.

Architect: Joseph Hoover, Pittsburgh.

Consulting Engineer: L. W. Cook, Pittsburgh.

Structural Steel Fabricated and Erected by American Bridge: 4,000 Tons.

AVAILABLE NOW! *For showing in churches, schools, clubs and industries, the new sound and color motion picture—BUILDING FOR THE NATIONS—a candid, factual photographic record of the highlights of the fabrication and erection of the United Nations' Secretariat Building.*

4,000-Ton steel framework fabricated and erected for 460-ft. semi-circular 7-story Administration Bldg. and 578-ft. Loading Dock

THE new thirty-three million dollar Greater Pittsburgh Airport, opened in June 1952, is an impressive sight. Its sixteen-hundred acre airfield is the second largest in the world . . . larger even than Washington's National Airport and New York's LaGuardia Field combined!

But, as impressive as is the airfield itself, it is overshadowed by the spectacular Administration Building. This seven-story, semi-circular structure with its long loading dock is easily the world's largest terminal building.

American Bridge fabricated and erected the 4,000-ton steel framework for this huge structure which is 460′ feet in breadth at its widest point, and with its 578-ft. loading dock has an over-all length of 979 feet. Nine months after the erection crew took over, the last rivet was driven.

This huge building is another example of American Bridge engineering and fabricating "know-how". And it is your assurance that you can depend on American Bridge to handle any type of steel-frame construction with thoroughness and speed . . . any time . . . anywhere. If you would like to know more about the advantages of American Bridge fabricated and erected construction, call our nearest office.

AMERICAN BRIDGE DIVISION, UNITED STATES STEEL CORPORATION
GENERAL OFFICES: 525 WILLIAM PENN PLACE, PITTSBURGH, PA.

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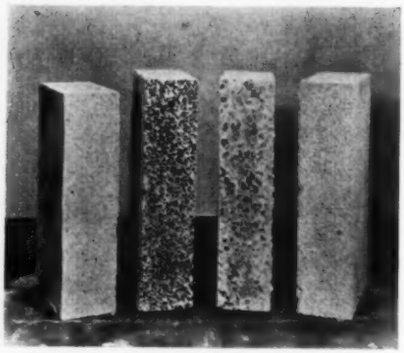
USS

UNITED STATES STEEL

(Continued from page 263)

CELLULAR CONCRETE BUILDING MATERIAL

A versatile cellular concrete which can be nailed, sawed and cut like wood, and has insulating, load bearing, acoustical and water resisting qualities, is being introduced in the United States. A European development, the material will be manufactured in this country under the tradename of *Calsi-crete*. The material is reported to cost less than conventional concrete, despite its having 8 to 16 times the latter's insulation value and weighing only 1/7 to 1/4 as much, depending on the density required. Three types of the lightweight material will be manufactured, each varying in strength and other characteristics, depending on the particular application. Franchises will be issued to firms throughout the nation for manufacture of the structural type materials.



Four densities of new material

With a bulk density of 40 to 55 lb per cu ft, the material's strength is such that it can be used for nearly all building needs. In weight, this compares with regular concrete weighing approximately 150 lb per cu ft. Material of this density can be used for both inside load bearing walls and facings, exposed or covered roof planks and similar applications where strength is essential. Products with a bulk density of 30 to 40 lb per cu ft have average load bearing qualities and are excellent for partitions, roof slabs and related uses. Material with 15 to 30 lb per cu ft provides little structural quality, but is ideal for firedoor cores, wall panels, ceilings, pipe coverings, cold storage and refrigerated rooms because of its outstanding insulation and acoustical features. It is believed the most suitable block size for the U. S. market will be 16-in. by 8-in. by required thickness (In Sweden it is 20-in. by 10-in. by required thickness; in England 18-in. by 9-in. by required thickness.)

The material is lightened by mixing preformed foam into a slurry comprised of siliceous material with the chosen cementitious material and water. The aerated fluid mix is cast to exact size or can be cut into required sizes before being cured in high pressure steam autoclaves. The product is ready to use within 24 hours after mixing. Because of its unicellular construction, it provides a moisture barrier having less than 1/4 the water absorption of regular building brick. Calsi-crete Corp., 321 N. Hamilton, Saginaw, Mich.

CONTEMPORARY FURNITURE

A nutmeg finished birch wood has been chosen as the material for a handsome buffet from California. Part of the *Fashions in Modern* series, the buffet contains three generous sized drawers on one side, and an adjustable shelf behind the tambour door on the right-hand storage compartment. The buffet measures 20 by 52 by 31 in. high. Furniture Guild of California, 1601 E. 15th St., Los Angeles, Calif.

(Continued on page 272)



Work-*saver:*

Complete

set of

sliding door

framing

details

sent

on request.

Grant

Grant Pulley and Hardware Corporation

31-71 Whitestone Parkway, Flushing, New York

carpet for Hathaway Co.!



BIGELOW Rugs and Carpets

Beauty you can see . . . quality you can trust . . . since 1825

Bigelow sales offices are located in the following strategic cities: Atlanta, Ga.; Baltimore, Md.; Boston, Mass.; Buffalo, N. Y.; Chicago, Ill.; Cincinnati, Ohio; Cleveland, Ohio; Columbus, Ohio; Dallas, Tex.; Denver, Col.; Detroit, Mich.; Hartford, Conn.; High Point, N. C.; Indianapolis, Ind.; Kansas City, Mo.; Los Angeles, Calif.; Milwaukee, Wisc.; Minneapolis, Minn.; New York, N.Y.; Philadelphia, Penna.; Pittsburgh, Penna.; St. Louis, Mo.; Salt Lake City, Utah; San Francisco, Calif.; Seattle, Wash.

*REG. U. S. PAT. OFF.

(Continued from page 268)

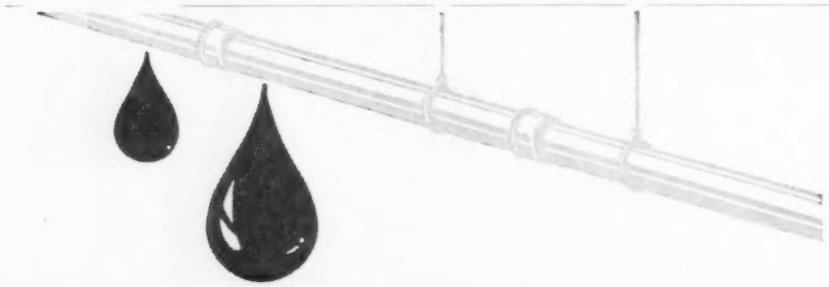
DECORATIVE DOOR KNOBS

Yale "Decor Knobs," hand-decorated, style-designed porcelain door hardware, which are the result of a long period of research and development by the manufacturers, will be available in 12 different designs and in three different knob shapes. Adaptable to rooms of every style, the new knobs reportedly offer a wide variety of decorations. Designed by Freda Diamond, the line includes delicate hand-painted floral arrangements on white backgrounds with green trim and gold applique; solid green, yellow, blue and muted Chinese red knobs, some trimmed in gold and others plain; knobs in black and green with speckled gold; black with gold spiral motif; plaid, and simple white and gold knobs.

A knob unit can be installed on almost any door in a matter of minutes. The units include one knob, an all-purpose spindle, a rosette, and a tube of special adhesive. Screws have been eliminated from the installation procedure. The specially designed adhesive furnished by the manufacturer is applied to the rosette, and enables the unit to be set into place permanently with a minimum of effort. The knobs and rosettes are described as washable and durable, and the lasting quality of the colors is said to be assured because they are fired into the porcelain. The Yale & Towne Mfg. Co., Chrysler Bldg., New York 17, N. Y.



Hand painted porcelain door knobs available in 3 shapes, 12 designs



How about piping costs after installation?



Leaks. Repairs—that's where you find the potentially high cost of non-permanent piping in corrosive applications. And it's not just the cost of plumbing and new pipe —figure in plastering and painting.

When you specify Duriron Acidproof Drain Pipe, the original cost is the last cost in most cases. Duriron is a high silicon iron alloy with extremely high resistance to industrial acids, erosion and abrasion. Available also in standard fittings. Full details in Bulletin PF/1.

DURIRON
LOOK FOR THE NAME ON EVERY PIECE

THE DURIRON COMPANY, Inc.
405 North Findlay Street
Dayton, Ohio

Available from stock in principal cities

HAND PRINTED FABRICS

Six new fabrics have been recently introduced to the Knoll International Designer Collection of contemporary fabrics. They include colors ranging from subtle to spectacular tones.

Imported from Scotland and developed by Knoll is the *Kerry Linen*, a textured weave particularly suited to upholstery and available in handsome color combinations. *Linen Casement* has been imported from Belgium and is woven with a slight vertical theme. Light and airy in appearance, this fabric comes in a range of nine clear prism colors. *Linen*, also imported from Belgium, is suitable for draperies or slip covers and may be obtained in red, yellow, charcoal, copper, natural and white. *Sparklers* was designed by Colombet of France and has light linear sprays, accented by spots of color. This fabric is available in antique satin or silk gauze. The two remaining fabrics in the new line are *Fibra* and *Spruce*, both designed by Eszter Haraszty — the first available in brilliant colors and in multicolor combinations; and the second, a delicate design taken from nature, showing a sprinkling of spruce leaves, and available in seven color combinations on linen or in silk gauze in black and white on white. Knoll Textiles, Inc., 575 Madison Ave., New York 22, N. Y.

(Continued on page 276)

Mr. Dahl has been building quality homes for over twenty years in the better residential areas of Seattle, including Magnolia Bluff, Magnolia, Windermere and Innis Arden. He says:

"To be truly *lived* in, today's home must include the latest equipment . . . *quality* equipment that gives the homeowner maximum comfort and convenience at a minimum of maintenance and operating expense.

"I have never had any trouble selling homes. They are sold before they are finished, and in most cases, I feel people want them because they are quality homes in every way and because they have the very best in modern appliances—General Electric."



Mr. Bernhard Dahl is a past president of both the Seattle Master Builders, Inc. and the Seattle Home Builders and Contractors.



Your clients' houses are easier to sell when you recommend the installation of General Electric Kitchen-Laundry equipment.

Mr. B. Dahl and Mrs. C. Cufley, shown here, are admiring the time-saving General Electric appliances in her new home. Mr. Dahl says:

"These beautiful General Electric appliances really impress prospective homeowners. They are, therefore, a factor in selling homes rapidly—in most instances, before they are completed.

"What also impresses me is that I have received no complaints about G-E appliances after the buyers move in and live with them. And I know that if I did have complaints, the General Electric Company would stand back of their products."

We suggest you recommend the installation of General Electric Kitchen-Laundry equipment to your clients.

For further data, see Sweet's Catalog, or write to Home Bureau, General Electric Company, Louisville 2, Kentucky.

GENERAL ELECTRIC

(Continued from page 272)

STORAGE UNITS

A new line of contemporary case pieces has recently been designed by Umanoff for the Elton Co. Including eight basic units, the *Elton Group* is made of walnut veneer and comes with strong metal framework of either wrought iron or solid brass. The units may be used separately or adjacent to each other, since all are 16 in. in depth and have uniform 6-in. bases. Each unit has two compartments which may be ordered as deep interior storage space, with shelves or drawers, or with a combination of the three. The shelves are adjustable on small wooden pegs which may be inserted wherever desired. The rigid metal framework is reported to prevent warping of the wood, and to protect veneer edges in shipping. The units are available in 48- and 60-in. lengths, and in four heights, 32, 44, 58 and 60 in. Panels may be easily unscrewed and slipped out for refinishing or replacement. The Elton Co., 201 E. 56th St., New York, N. Y.



Walnut room divider has iron trim

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This NEW Data File on Gymnasium Floors FREE

JUST ENLARGED AND REVISED*



- Blueprints standard court diagrams for basketball and 10 other popular sports.
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*First Printing 1950

Here's a valuable data file for architects—excellent for planning or to pass on to contractors or job captains—a practical reference when specifying for gymnasium construction or refinishing. Concisely written; "How to do it" illustrated; file sized (11 x 8½"). Available without charge—Just fill out the coupon and mail.

Hillyard "specs" on every type of floor available on request.

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Please send my copy of Hillyard's new AIA File No. 25G, GYMNASIUM FLOORS.

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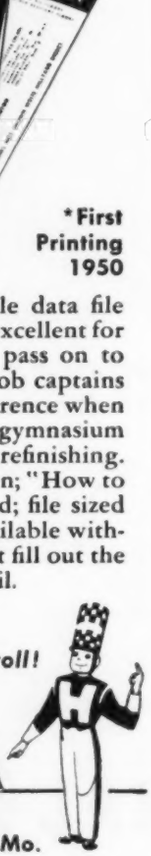
Title _____

Firm _____

Address_____

City_____ State_____

On Your Staff ... Not Your Payroll!



St. Joseph, Mo.

MULTICOLORED PLASTIC PAINT

Multicolored textured effects on interior surfaces can now be achieved in a single spray application with a new paint known as *Plextone*. Multicolor effects can be obtained in just one ordinary spray application because the multiple colors exist separately within the paint. On the other hand, when two colors are mixed together, the globules of each retain their own identity. When the paint is sprayed on a surface the colors create a textured appearance and an interlacing color network. The paint is produced in a number of decorator-styled color combinations, and is also available in solid colors which can be mixed together by stirring, to produce an unlimited variety of color effects. It can be applied to any of the materials commonly used in interior building construction — plaster, wood, wall board, concrete and metal. Ordinary spray guns and regular spray techniques are used. Since the paint gives off no spray dust or fog, it reportedly makes for an exceptionally clean job. Simple precautions, such as masking, drop cloths and hand shields normally provide all the cover necessary for surfaces to be protected from the paint.

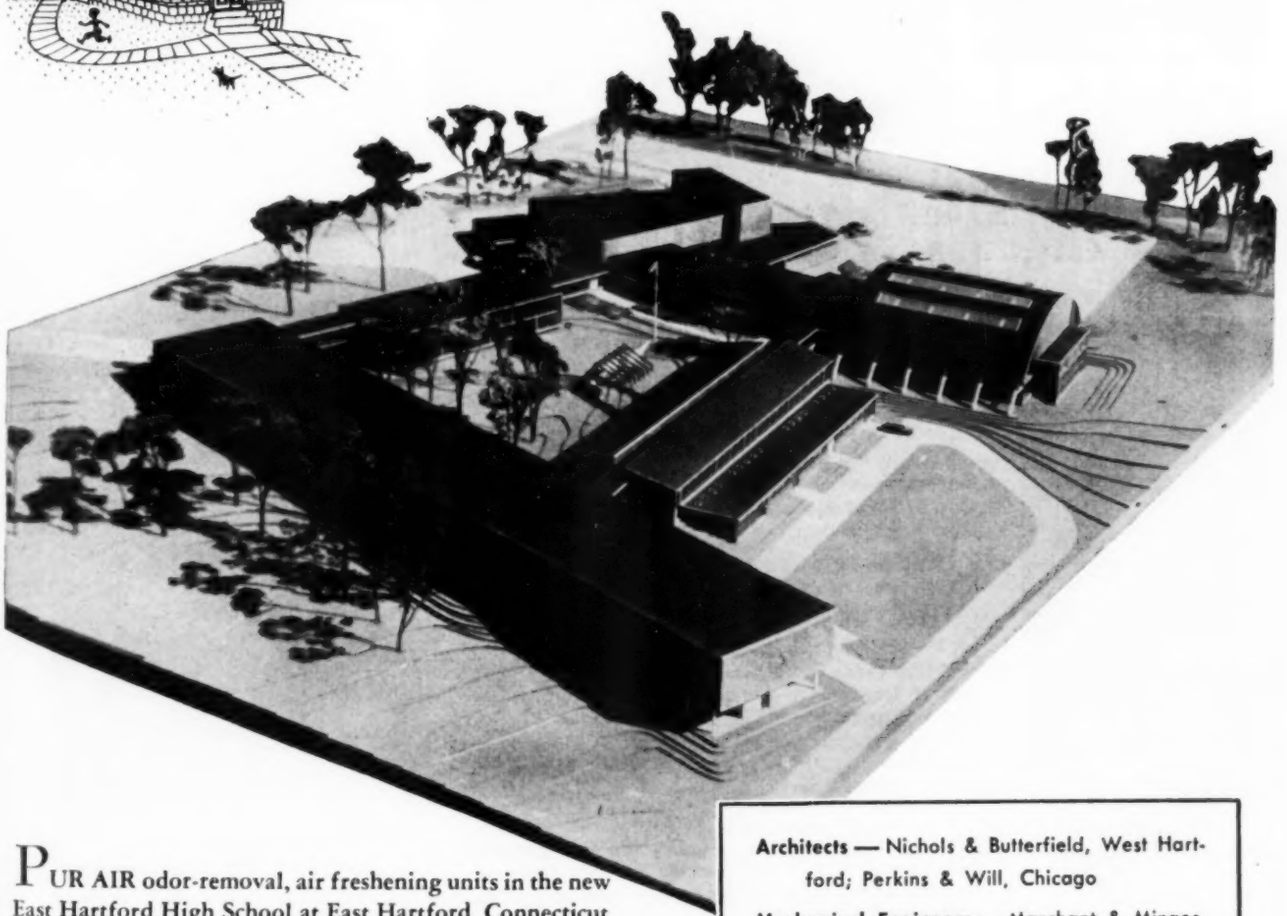
A cited advantage of the paint is the ease with which its textured surface can be touched up. Because of this feature, it can be applied in new construction work before plumbing and lighting fixtures are installed. If the finish is marred during subsequent installations, it can be easily touched up. The painted surface also can be cleaned easily, and even marks ordinarily considered indelible can be removed by lightly sandpapering the surface, since the color pattern exists throughout the coating. The surface is also said to be highly resistant to scratching and chipping. If damage does occur under severe conditions, the

(Continued on page 278)

The Little Red School House was Never Like This!

"PROGRESSIVE EDUCATION" IN PURIFYING AND RE-USING AIR SAVES $5,000 YEARLY ON HEATING





PUR AIR odor-removal, air freshening units in the new East Hartford High School at East Hartford, Connecticut will pay double dividends. First, students will enjoy cleaner, fresher, more healthful air, and second, savings on the fuel bill will be a substantial $5,000 annually. By recirculating and purifying confined air thru Pur Air, Activated, Coconut-Shell Carbon Adsorbers (filters), less re-heating of outside air is needed. Projected over a 20-year period, the estimated $100,000 savings would pay for the Pur Air installation many times over. For complete details on the story of Pur Air, Activated, Coconut-Shell Carbon for odor-removal, call your local Pur Air representative, or write:

Architects — Nichols & Butterfield, West Hartford; Perkins & Will, Chicago

Mechanical Engineers — Marchant & Minges, West Hartford

General Contractor — A. F. Peaslee, Inc., Hartford

Heating Contractor — Thos. G. Shaffer, Inc., Hartford

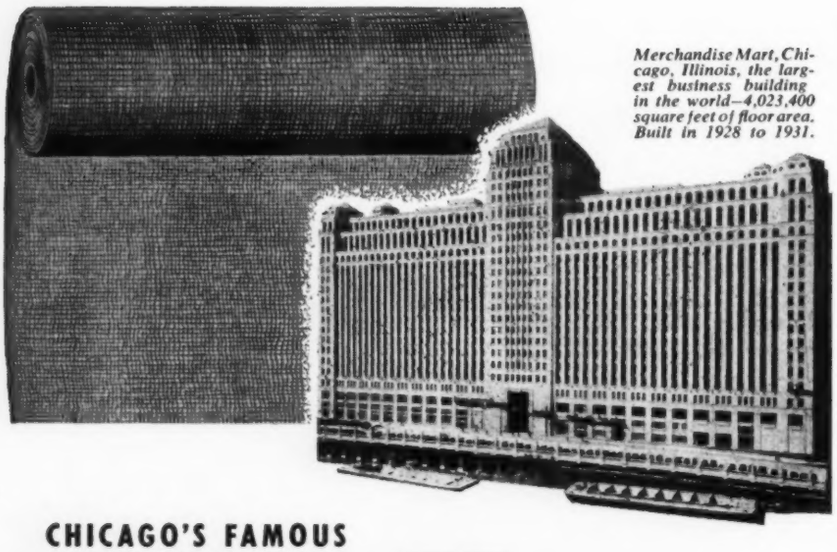
Sheet Metal Contractor — Automatic Refrigeration Co., Hartford

Pur Air Representative — Augur, Jones & Green, Hartford

Pur Air DIVISION

BARNEBEY-CHENEY *Company*

N. Cassady at Eighth Columbus 19, Ohio



Merchandise Mart, Chicago, Illinois, the largest business building in the world—4,023,400 square feet of floor area. Built in 1928 to 1931.

CHICAGO'S FAMOUS MERCHANDISE MART CALLED FOR

Karnak®

WATERPROOFING PRODUCTS



Karnak fabric is packed in sturdy, corrugated cartons for protected shipping and storage. They keep the fabric in perfect condition until used . . . cut fabric loss.

Twenty-five years ago, the problem of protecting the foundation of the "Mart" from hydrostatic head was answered with *Karnak*. Even though the big Chicago River flows beside it, *this Karnak job holds secure.*

Why was *Karnak* chosen? Because it is the membrane system of waterproofing *that holds tight against any water condition.*

Karnak is an open mesh long-fibre cotton cloth that has been heavily impregnated with highly refined asphalt *so as to leave the mesh open.* It is layered, on the job, with alternate moppings of asphalt to *provide a tough, resilient, waterproof membrane.* The non-sticking fabric unrolls easily . . . to the very end. It "works" faster and with no waste . . . saves labor costs.

The *Karnak* Membrane System is best for roof patching, skylight flashing, window and door flashing, through-wall and cornice flashing, as well as waterproofing against a hydrostatic head in dams, swimming pools, viaducts and tunnels. Send coupon for complete information. Manufactured by Lewis Asphalt Engineering Corp., 30 Church Street, New York 7, N. Y.

SEE OUR CATALOG IN SWEETS FILE

OTHER KARNAK PRODUCTS

Asphalt Roof Coatings and Cements	Asphalt Emulsions	Aluminum Roof Coating
Caulking Compounds	Tile Cement	Wood Block Mastic
	Asphalt Paint	Joint Filler

LEWIS ASPHALT ENGINEERING CORP.

30 Church St., New York 7, N. Y.

Please send me ***FREE*** information about KARNAK Membrane System of Waterproofing

NAME_____

ADDRESS_____

CITY_____ ZONE____ STATE_____

*Other items I'd like to know about*_____

AE PRODUCTS

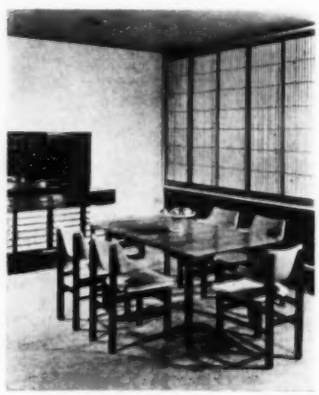
(Continued from page 276)

damaged spot can be touched up without repainting the entire wall.

The paint already has been used on the interiors of more than 14,000 homes, as well as in offices, institutions, multiple dwellings and similar structures. Plans are now in progress for later introduction to consumers. Maas & Waldstein Co., 2121 McCarter Highway, Newark, N. J.

INTERCHANGEABLE FURNITURE GROUP

The *Dunbar "Career Group,"* new furniture series designed by Edward Wormley, comprises more than 144 separate units. Each piece is interchangeable in living room, dining room and bedroom, in keeping with fluid-space room planning. A cabinet unit



Dining chairs are laminated wood with comfortable elbow rests

measuring 36 in., for example, is sized and styled for use in a bedroom of small dimensions. Yet by the addition of matching units, it can be set up attractively as part of a grouping for a more amply proportioned living room or dining room. All case pieces in the group are in walnut in the more natural tones. Greater emphasis, however, has been laid on the deeper tones of wood as trimming. All case pieces are either on walnut legs connected front and back by an apron stretcher or 3-in. leather covered bases. Pulls are laminated wood covered with top grain leather, or a pull especially designed in Japan. All pull-out trays in case pieces work on metal channels for easy gliding. Case pieces feature interior backs and shelves of white maple

(Continued on page 280)

Ten Years in the Making . . .

THE NEW BOOK PREPARED BY

AMERICA'S FOREMOST AUTHORITIES ON

HOSPITAL DESIGN AND ADMINISTRATION



DESIGN AND CONSTRUCTION OF GENERAL HOSPITALS

[a collaborative publishing effort of Architectural Record and The Modern Hospital to present the work of the U. S. Public Health Service]

The last ten years have witnessed such revolutionary progress in medical science that the very basic approach to the design of hospital buildings has been completely changed.

Expanded medical services, new diagnostic, surgical and therapeutic techniques have demanded an entirely new concept of hospital planning.

To meet this challenge, architects, hospital officials and public health authorities working together have evolved far-reaching improvements in design, equipment and facilities.

To examine, interpret, and report these momentous changes, the editorial staffs of two leading professional journals—ARCHITECTURAL RECORD and MODERN HOSPITAL—pooled their efforts with those of the Division of Hospital Facilities, U. S. Public Health Service and the fruits of this effort are contained in this comprehensive new book. This vast fund of planning information has never before been made available in one place.

"Design and Construction of General Hospitals" presents prototypes of successful hospital design, complete with 30 master plans for hospitals of every size. Each plan is accurately scaled, fully detailed, and visualized in a skillful rendering. Illustrations of floor plans, site plans, and a variety of charts and tabular data help to provide step-by-step guidance in the planning—from early sketches to completed buildings—of a modern hospital that truly suits the needs of today's most scientific therapy.

This authoritative volume is certain to win regard as the standard reference work on hospital planning for years to come. It is a source of information and planning data that neither hospital administrators nor hospital architects can afford to ignore.

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30 separate "pilot plans" for hospitals of various sizes, from 20-bed to 400-bed buildings

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D. Obstetrical Facilities
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A One-Volume Library of Information

Entirely different from any previous book on the subject, "Design and Construction of General Hospitals" represents the *combined experience* of specialists in six professions:

Architecture—Engineering—Medicine & Surgery
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F. W. Dodge Corporation,
119 West 40th Street, New York 18, New York

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Please send my copy of this new book immediately.
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Tops in Toplighting



Skydomes are tops for schools because they allow greater freedom of design. They make it possible to have lower ceilings and simple frame construction, resulting in balanced, glare-free daylighting at lower cubage costs. Skydomes bring more daylight into the far corners of rooms and corridors . . . at a lower cost per square foot . . . than any other toplighting! To darken rooms for visual education, specify prefabricated Wascolite Skyshades.



Skydomes . . . acrylic plastic domes that literally float in extruded aluminum, flash-welded frames — are the product of years of Wasco engineering research. Their patented construction makes full allowance for expansion and contraction, and complete condensation control. They are economical, too, because they are easy to install, reduce illumination costs and are maintenance-free.

You can specify Wascolite Skydomes with confidence for school, home and industrial installations. Available in clear or white translucent plastic, in 3 basic shapes and 25 stock sizes.

Available now — a Wascolite Daylight Engineering Study for your project. Just send blueprint and lighting requirements — we will submit complete light distribution and illumination data. No obligation. For additional information, see Sweet's Catalog, or write



Wasco Flashing Company
82 Fawcett St., Cambridge 38, Mass.

AIA PRODUCTS

(Continued from page 278)

so that interiors will be lighter, making it easier to find things in drawers or on shelves.

Fabrics for many of the upholstered pieces in the line were especially designed by various manufacturers. One of the most unusual of the upholstered pieces is a tufted chair with back especially designed for the tall man.

Two dining tables have been included in the group, each with special features. One is a rectangular extension table; the other is an oval drop-leaf table with a gate leg. For the dining room, too, are new laminated wood elbow chairs. Dunbar Furniture Corp. of Indiana, 305 East 63rd St., New York, N. Y.

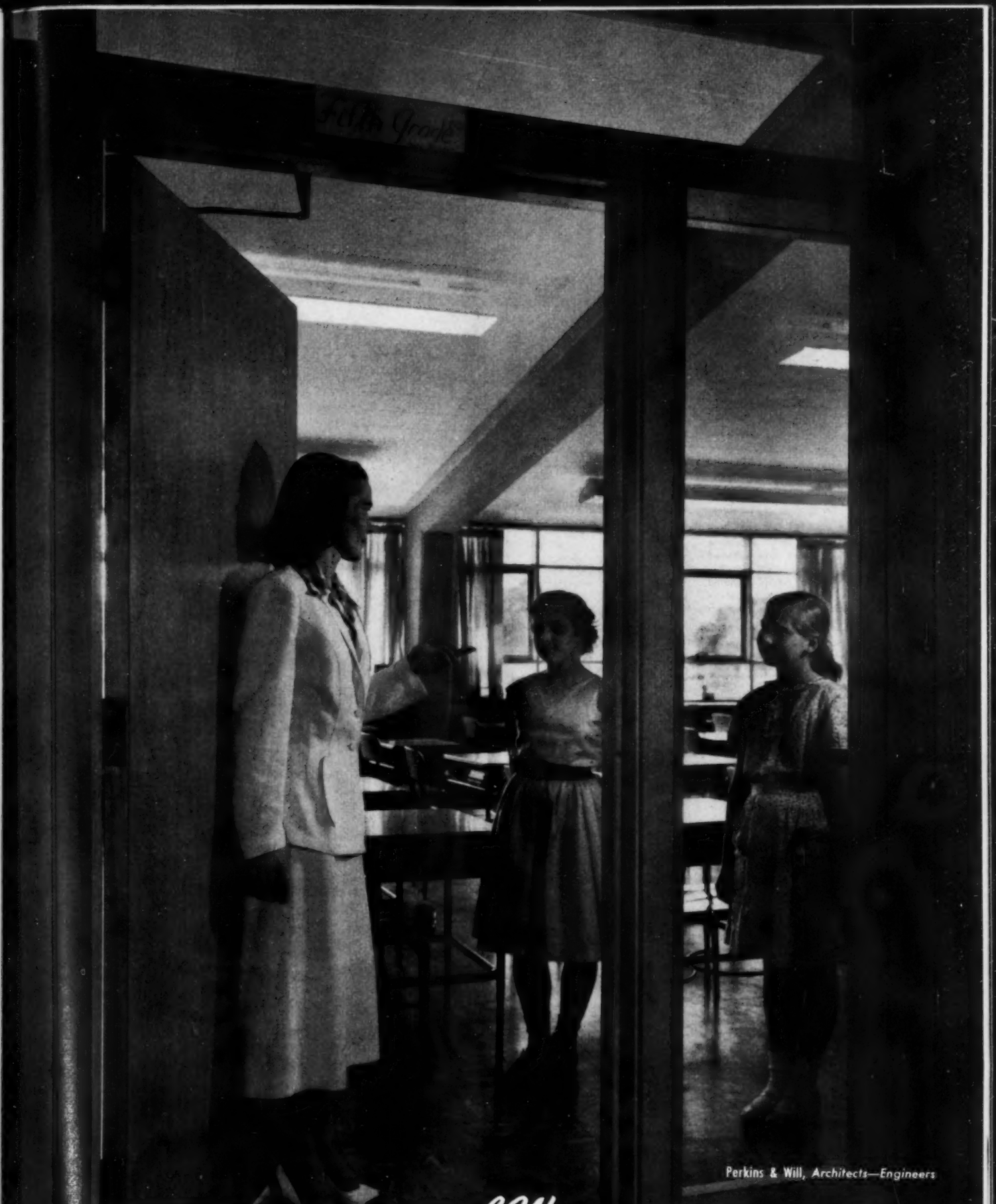
LIGHTING TRANSFORMERS

A new line of general purpose *Marcus* lighting transformers has been designed specifically for quicker, easier installation outdoors as well as indoors. Designated as Marcus "Type C," the new transformers are available in sizes from 1 to 15KVA, single phase and three phase, up to 600-v. As in all the manu-



Lighting transformers are quickly installed indoors or outdoors

facturer's dry type transformers, the new models feature Class B heatproof, high-dielectric, high-heat insulation with a new Du Pont "Mylar" polyester film, said to have at least 10 times the puncture strength of standard magnet wire. To permit mounting outdoors, the housing of the new transformer has been redesigned with an electrically welded sheet steel case and vents scientifically placed to provide weatherproof ventilation. A completely self-contained wiring compartment is said to result in greater ease and speed of installation. All sizes of the new line are presently available from stock. Marcus Transformer Co., Hillside, N. J.



Perkins & Will, *Architects—Engineers*

MODERN DOOR CONTROL BY *LCN* · CLOSER CONCEALED IN DOOR

RALPH R. SMITH ELEMENTARY SCHOOL, HYDE PARK, NEW YORK

LCN CATALOG 12-A ON REQUEST OR SEE SWEET'S • LCN CLOSERS, INC., PRINCETON, ILLINOIS

Fleetlite 3-D WINDOW

AMERICA'S FINEST WINDOW

NOW EASIEST TO INSTALL

(built with the BUILDER in mind of extruded aluminum)

It is now possible to install America's most-wanted window in old or new construction, in standard or special size window openings.

A new balance system makes the window a completely rectangular unit that easily slips into place.

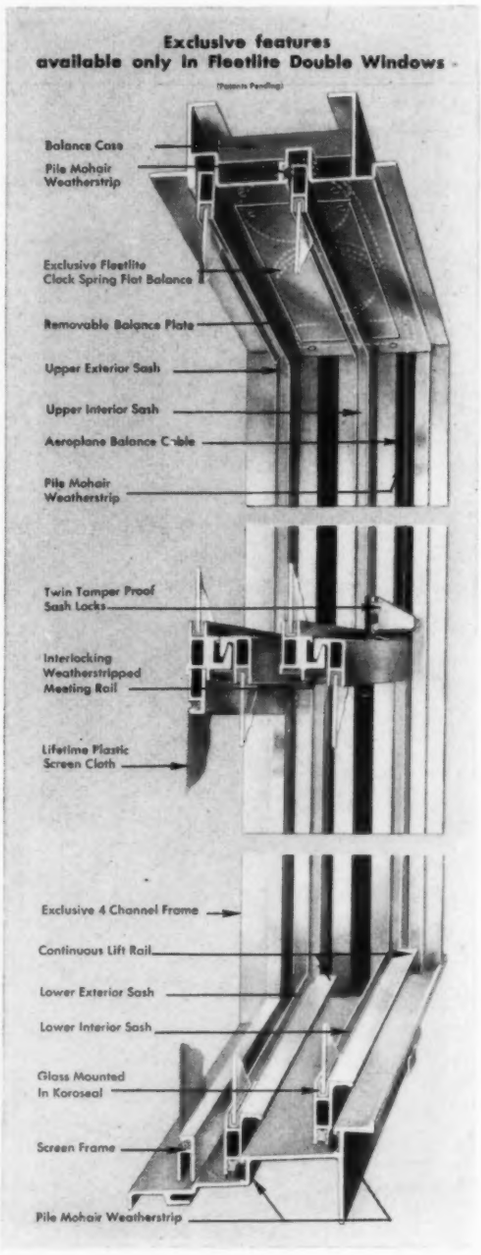
Fleetlite Windows are precision-made at the factory and shipped direct, ready for speediest possible installation. (Our newly-opened Des Moines, Iowa Plant speeds shipping to western points at lower costs.)

Study this cross section Diagram for Exclusive Fleetlite Features.

Such as:

1.) Balanced sash with patented automatic locks found on no other windows.
2.) Removable sash for cleaning from the inside.
3.) Pile mohair weatherstripping.
4.) Glass set in Koroseal instead of putty.
5.) New twin tamper proof locks.
6.) Quadruple seal at sill.
7.) New exclusive flat type overhead balances.
8.) Lifetime plastic screen cloth.
9.) Complete elimination of maintenance or painting.
10.) The only complete double window for your protection against all the elements.

—for economical air conditioning.



Picture Windows — available to match.

"Money can buy no finer window than Fleetlite"

WRITE TODAY for the full story on Fleetlite . . . not just a new window but a NEW KIND OF WINDOW with a "third dimension".

Fleetlite AMERICA'S Finest WINDOW

FLEET OF AMERICA, INC. 407 Dun Building, Buffalo 2, New York

A.E. LITERATURE

(Continued from page 212)

KEEPING COOL

Summer Comfort. Brochure compiled by The Small Homes Council at the University of Illinois contains suggestions for keeping heat out of houses. Such means as insulation, orientation and sun controls are discussed. The latter category includes overhangs, trees and other tall plantings, free-standing vertical sunshades, louvers, awnings and the use of light colors. Methods of ventilation for reducing temperatures below the roof are given, and recommended fan capacities are shown for various floor areas of the house. Operations of air conditioning systems are explained for water cooled condensers and cooling towers, warm air and hot water systems, heat pumps, room air conditioners and evaporative coolers. Descriptive drawings accompany text. 8 pp., illus. 10 cents. Small Homes Council, Mumford House, University of Illinois, Urbana, Ill.

HEAT PUMPS

Architect's Guide to the General Electric Heat Pump. Booklet shows, with photographs, floor plans and text, how all-electric heating and cooling without fuel or water functions. Four typical layouts are given for homes using the heat pump, and design advantages and application hints are included. Questions which have been asked about this method of heating and cooling are answered, along with a description of how it works. 15 pp., illus. General Electric Co., Heat Pump Dept., Advertising Services Section, 5 Lawrence St., Bloomfield, N. J.*

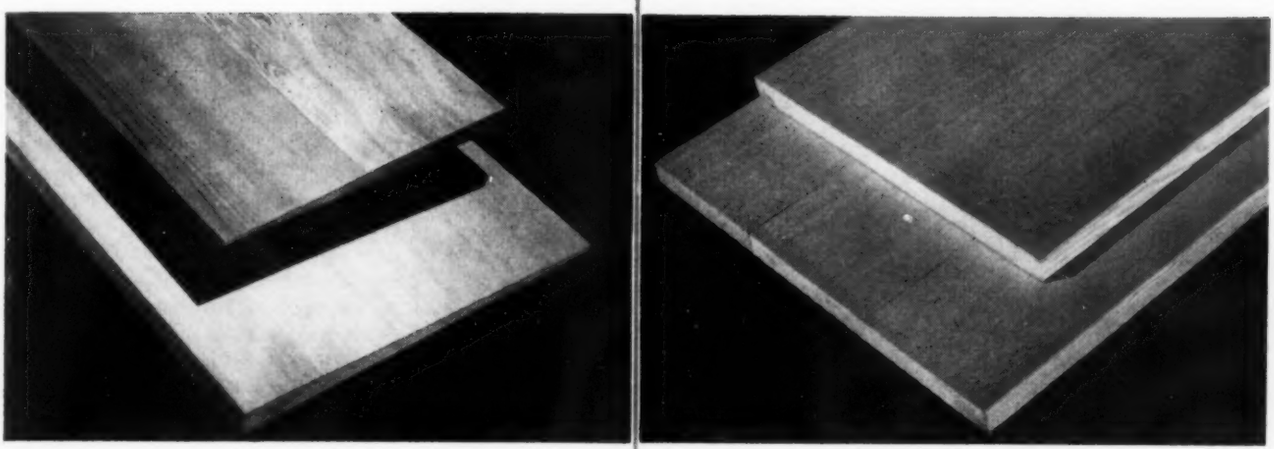
STAINLESS STEEL BARS

Allegheny Metal Stainless Bars. Booklet contains technical information to aid the user in the selection of the proper stainless steel material for the particular job at hand. Included in the book are reference tables on sizes and shapes available, weights and corrosion resistance. An eight-page section of helpful fabrication and processing information covers cutting, welding, forging, upsetting, machining, drilling, reaming, tapping, threading, turning, milling, annealing and heat treating. 28 pp., illus. Allegheny Ludlum Steel Corp., Oliver Bldg., Pittsburgh 22, Pa.*

(Continued on page 286)

Increasing the supply of

WIDE LUMBER ITEMS



WITH

WEYERHAEUSER 4-SQUARE

Glued-up LUMBER

When the quantity of lumber items that are chronically in short supply is increased, that's welcome news for architects . . . because the increased supply offers a means of satisfying more clients.

Weyerhaeuser 4-Square Glued-Up Lumber is increasing the supply of wide lumber items. Edge-glued lumber is helping architects to meet the needs of their clients for *more* wide lumber.

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The edge-gluing of lumber is a proved Weyerhaeuser development. If you are not now enjoying the advantages of glued-up lumber, ask your Weyerhaeuser 4-Square Lumber Dealer about it—or write for details.



Exterior Type: BUNGALOW SIDING of Western Red Cedar: **SELECTS** of Idaho White Pine, Engelmann Spruce and Inland Red Cedar: **FINISH, STEPPING** and **WIDE CLEARS** of Douglas Fir and West Coast Hemlock.

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In Canada: Porcelain and Metal Products, Ltd. Orillia, Ontario

AEH LITERATURE

(Continued from page 282)

MULTI-COLOR PAINT

Zolatone Process. Booklet contains a complete description of the manufacturer's process of painting two or more colors at the same time, giving color range and physical properties. Architectural applications indicate the scope to which the system may be applied, and illustrate the method of application, life expectancy and maintenance. Data on architectual surfaces requiring special painting systems is included, with recommendations as to where the paint should or should not be used. Equipment and spraying suggestions are based on the manufacturer's accumulated experience, and are intended to serve as a guide for eliminating many problems that could arise in the application of the paint. Handling and storage suggestions are given, and information on ordering materials is also included. 32 pp., illus. Paramount Paint & Lacquer Co., 3431 East 15th St., Los Angeles, Calif.

ELECTRICAL FITTINGS

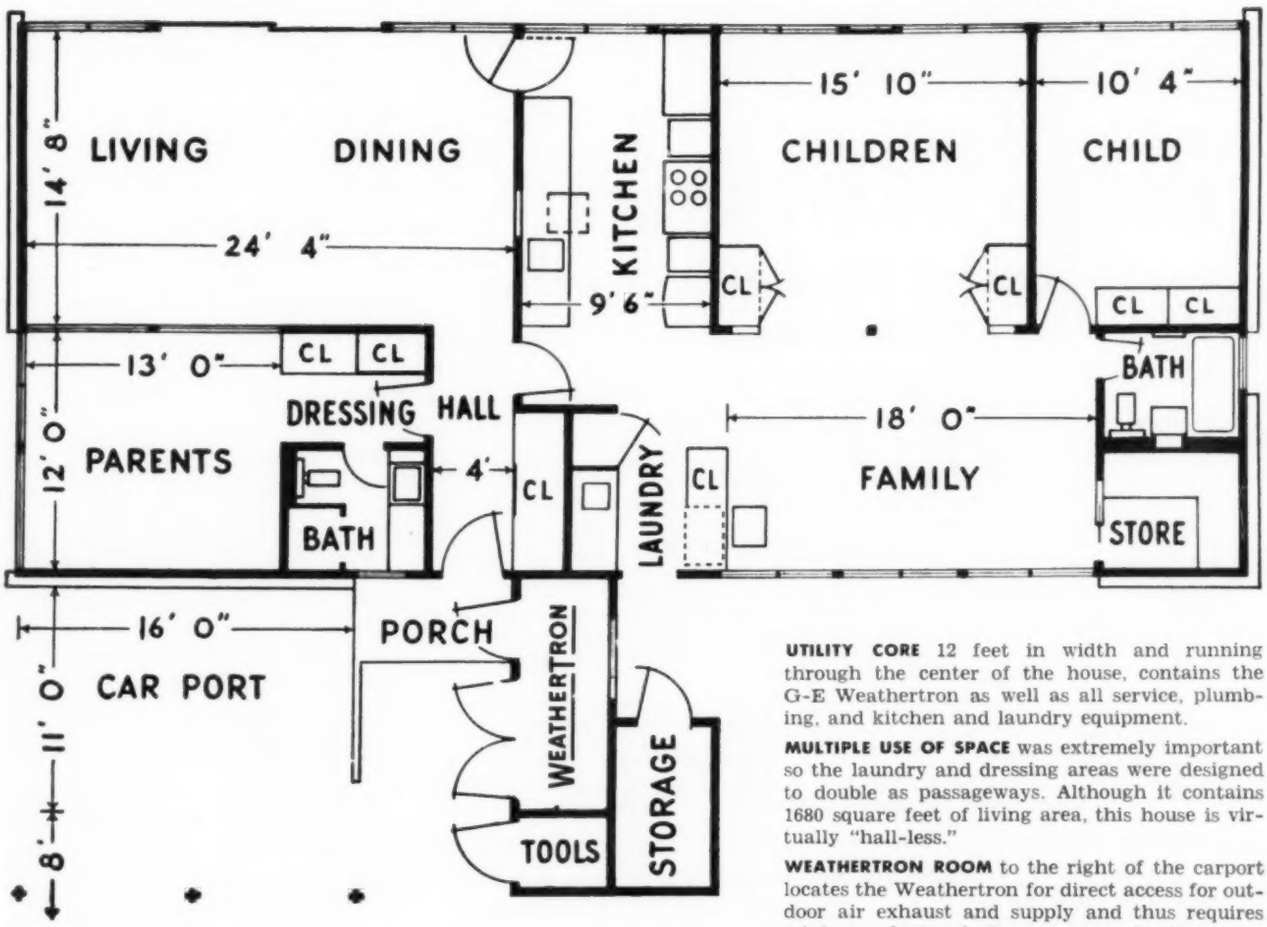
Buchanan Electrical Fittings, Catalog 53. Brochure describes manufacturer's complete line of solderless wire connectors and specialized electrical fittings. Contains illustrated descriptive information on "pres-SURE-connectors" for solderless wire splicing and terminating, "Bushend" insulated bushings for electrical metallic conduit, and "Snap-Action" plugs for temporary or permanent plugging of knockout holes in wiring device boxes and other applications. Heavy duty molded terminal blocks in various styles, types and sizes are also described, and complete specifications, dimensional data and ordering information are given. 15 pp., illus. Buchanan Electrical Products Corp., Hillside, N. J.

INSTITUTIONAL FURNITURE

Huntington Institutional Furniture, Catalog No. 104. Brochure presents line of furniture designed especially for hotel rooms, nurses' homes, dormitories etc. Included in the booklet are descriptions and photographs of such furniture items as dressers, combination chests and writing tables, desks, tables, beds, mirrors and wardrobes. Typical room layouts are given for dormitory quarters and nurses' homes. Also available with

(Continued on page 290)

Weathertron cools and contemporary home



FLOOR PLAN shows how this home was specifically designed for today's family living. The plan encourages family group activities yet all members of the family are afforded a degree of privacy not generally found in a home this size.

MULTIPURPOSE FAMILY ROOM is the activity center of this home. Here the family eats breakfast and lunch, gathers to watch television or home movies, to play games and to work at their individual hobbies. Mother can easily and unobtrusively supervise the children as she works. Nominally 12'x 18', folding ceiling-height doors in the larger children's room can be pushed back to make the family area a spacious 18' x 27'.

UTILITY CORE 12 feet in width and running through the center of the house, contains the G-E Weathertron as well as all service, plumbing, and kitchen and laundry equipment.

MULTIPLE USE OF SPACE was extremely important so the laundry and dressing areas were designed to double as passageways. Although it contains 1680 square feet of living area, this house is virtually "hall-less."

WEATHERTRON ROOM to the right of the carport locates the Weathertron for direct access for outdoor air exhaust and supply and thus requires minimum ductwork. To save space, the Weathertron is placed like a cabinet in a wall, with removable panels for servicing.

GENERAL ELECTRIC



General Electric Company, Air Conditioning Division, Section AR-11, Bloomfield, New Jersey

☐ Please send me the "Architect's Guide to the G-E Weathertron" and other Weathertron literature.

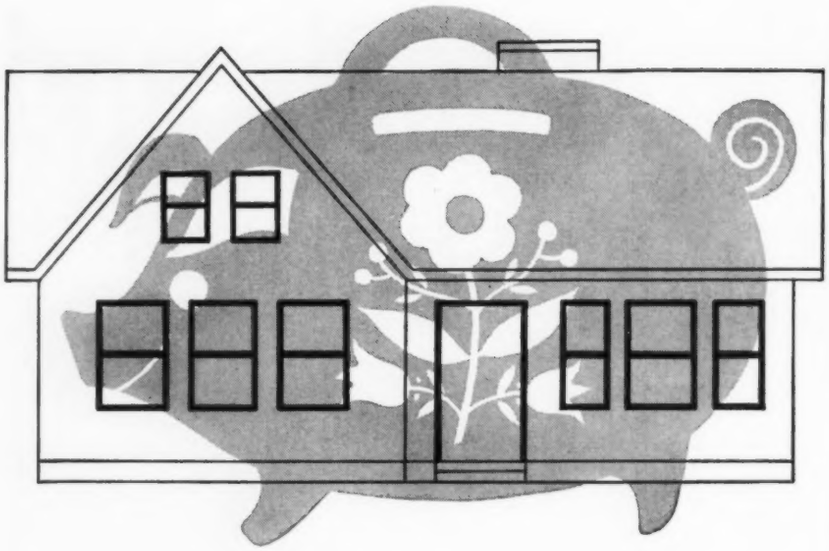
☐ Also include technical data on the G-E *Air-Wall* system.

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The metal weatherstrip that is installed should depend mainly on two factors: reputation of the product and reputation of the manufacturer. Members of the Weatherstrip Research Institute possess both—a reputable product, and all are reputable, long established companies. Remember these facts when considering metal weatherstrip for the homes you build.

WEATHERSTRIP *Research* INSTITUTE
OFFICE OF THE SECRETARY
BOX 101, RIVERSIDE, ILLINOIS
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For complete facts on the economic value of weatherstrip, send for Bulletin No. 35—"Air Infiltration Through Weatherstripped and Non-Weatherstripped Windows," published by the University of Minnesota Institute of Technology—no charge or obligation.

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ZEGERS, INC.
8090 So. Chicago Ave., Chicago 17, Ill.

AH LITERATURE

(Continued from page 286)

the catalog are complete specifications covering materials and construction of the manufacturer's furniture, and dimensional drawings of the complete line. Huntington Chair Corp., Huntington, W. Va.

DUCT INSULATION

Fiberglas Duct Installations. Design data booklet contains photographs and drawings of the various rigid and flexible Fiberglas insulations for the exterior and interior of warm and cold air ducts. Included in the booklet are properties and application methods for various duct insulations, and the method of sealing joints in Vapor-Seal duct insulation, shown with step-by-step pictures. Specifications for insulation of duct system are given. 15 pp., illus. Owens-Corning Fiberglas Corp., Toledo 1, Ohio.

SAFETY MANUAL

Working Together for Safety is the title of a new National Safety Council's employe rules manual. The booklet contains instructions in safe work habits applicable to employes in most plants. The practical experiences of workers, supervisors and safety specialists have established the safe practices covered. These begin with a list of general safety regulations and continue with special sections on machine operation, hand tools, power tools, protective clothing, fire prevention, materials handling and many other related topics. 32 pp., illus. The National Safety Council, 425 N. Michigan Ave., Chicago 11, Ill.

WATERPROOFING MEMBRANE

Let's Look at Membranes. Bulletin presents technical information and data on "Glasfab," an inorganic waterproofing membrane made from Fiberglas. A comparison is made with other types of waterproofing membranes, such as cotton, jute and felt, to show weight, tensile strength, bursting strength and char resistance. Characteristics, advantages and various applications are treated. Application specifications, material specifications and production standards are also given, — along with

(Continued on page 294)

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One way to find out how architects and engineers rate architectural magazines is to *ask them yourself.*

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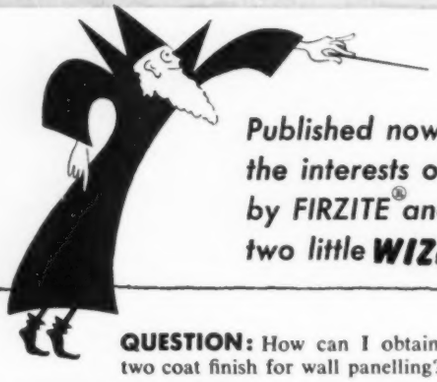
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Istanbul Hilton Hotel, Istanbul, Turkey. First presented to architects and engineers in Architectural Record. Architects: Skidmore, Owings & Merrill; Sedad H. Eldem. Photographer: Ezra Stoller.

The Architect's Question Box



Published now and then in the interests of wood finishing, by FIRZITE® and SATINLAC®, those two little ***WIZARDS WITH WOOD.***

QUESTION: How can I obtain a durable yet inexpensive two coat finish for wall panelling?

ANSWER: Clear or White FIRZITE, wiped off, followed by paste wax makes an excellent two coat job. Colors-in-oil can be added to the FIRZITE for other shades.

QUESTION: Should wood be sanded before finishing?

ANSWER: Definitely. Sanding removes finger and dirt marks as well as any roughness caused by moisture. Poorly sanded or unsanded sections are likely to cause a spotty or irregular finish.

QUESTION: Why is it recommended that the painter make up samples before he starts the job?

ANSWER: Samples should be made up on odds-and-ends pieces of the wood used, as different growths of the same wood vary in tone. Also, the architect then knows he will get the effect required. With FIRZITE and SATINLAC the painter has an easy way to a beautiful and durable finish.

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May we send you a blond Birch panel showing SATINLAC finish?

UNITED STATES PLYWOOD CORPORATION
Dept. 258, 55 West 44th Street, New York, N. Y.



A/E LITERATURE

(Continued from page 290)

standard roll size. 13 pp., illus. Twinsburg Miller Corp., P. O. Box 207, Twinsburg, Ohio.

POWDER-ACTUATED FASTENING SYSTEM

Modern Fastening Methods. Booklet is the first complete applications manual ever prepared for use with the manufacturer's powder-actuated fastening system. Compiled from field reports, it includes many photographs and cutaway sketches to show precisely how the tools and fasteners are best employed in various installations in building, construction and maintenance fields as well as many other crafts. The manual lists the specifications for more than 20 fixtures and accessories and 56 drive pins and threaded studs which make up the manufacturer's system. Selection tables setting forth the proper type of fastener and the proper powder charge for various receiving materials are included as a guide. 28 pp., illus. Ramset Fasteners Inc., Ramset Div., Olin Industries, Inc., 12117 Berea Rd., Cleveland 11, Ohio.*

LABORATORY FURNITURE

Metalab Sectional Laboratory Furniture. Catalog contains sections on standard sectional units, center tables, wall tables, specialized industrial equipment, fume hoods, storage cabinets and cases and laboratory sinks. Complete information is given on overall dimensions and fittings for the various units described, and each article is photographed or sketched in detail. Other laboratory furniture described in the catalog includes service fixtures and accessories, stools and chairs, student and instructor desks, homemaking and shop equipment and hospital casework. Planning information is given, and specifications for construction and materials are shown. 176 pp., illus. Metalab Equipment Corp., Hicksville, Long Island, N. Y.

WALL RADIATION

Fedders Wall Radiation, Catalog WR-C3. Catalog includes uses, basic layout, information on element supports, approved steam ratings, hot water capacities, cover dimensions and conversion factors for steam pressures and air tem-

(Continued on page 298)

MODERN ONE-STORY SCHOOLS

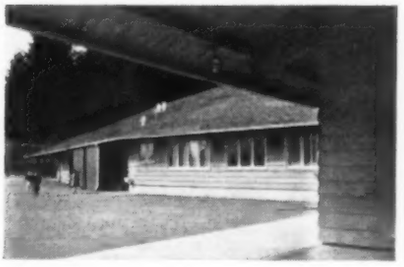


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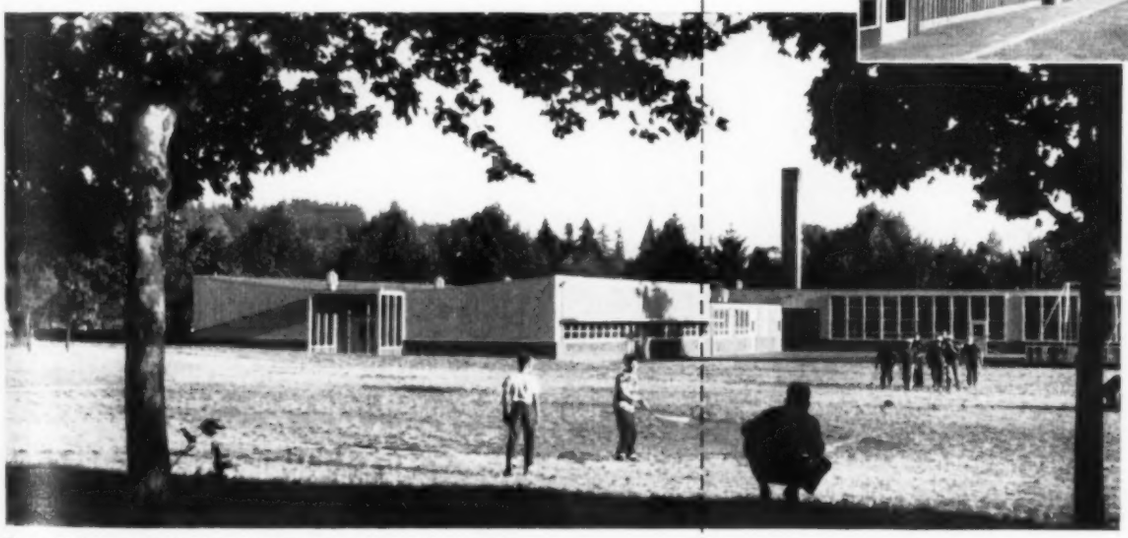
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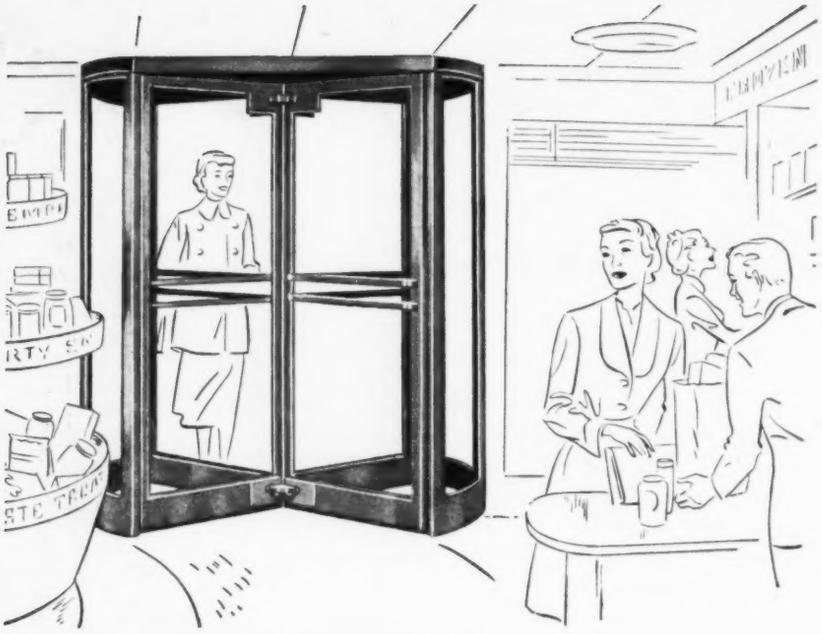
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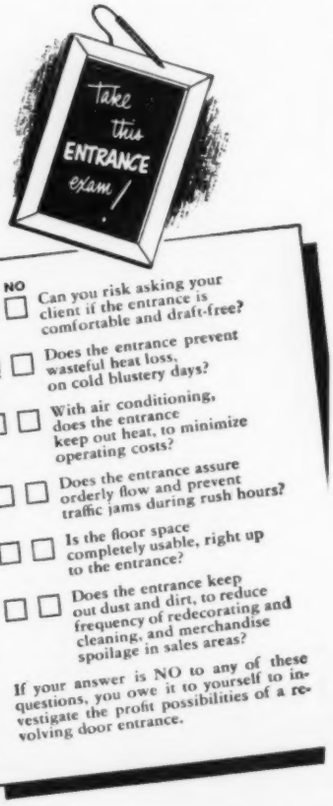


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A-E LITERATURE

(Continued from page 294)

peratures other than standard. Ordering information is included, and typical specifications are given. Diagrams, drawings and photographs illustrate descriptive text. 11 pp., illus. Fedders-Quigan Corp., Buffalo 7, N. Y.*

HEATING SYSTEM CONTROLS

Weather Compensating Control Systems, Catalog ST500–1. Brochure contains information on outdoor and outdoor-indoor controls, and gives the principle of operation of weather-controlled modulating valves. Centralized program control panels are illustrated and described. Complete technical data and typical specifications are included. 16 pp., illus. Sarcotherm Controls, Inc., Empire State Bldg., New York 1, N. Y.*

CASTERS AND WHEELS

Fairbanks Casters and Wheels. Brochure presents the complete line of casters and wheels by the manufacturer, featuring a new method of designing casters without a king-pin. Single and double ball race swivel casters incorporating this construction are detailed in photos and description. Also shown is a new line of heavy-duty steel casters available in double race swivel and matching rigid type. The circular includes data on vulcanized rubber-tired roller bearing wheels, manufactured in sizes ranging from 3 to 18 in. 8 pp., illus. Fairbanks Co., 393 Lafayette St., New York 3, N. Y.

LITERATURE REQUESTED

The following individuals and firms request manufacturers' literature:

E. H. Amort, Student, Roseggerstr. 23, Linz Danube, Austria.

R. A. Clarke, Student, 17 Overlook Rd., Randolph, Mass.

Nick Diaman, Student, Route 2, Box 481, Lodi, Calif.

W. N. C. Potter, Architect, 36A Terry Rd., West Ryde, Sydney, N.S.W., Australia.

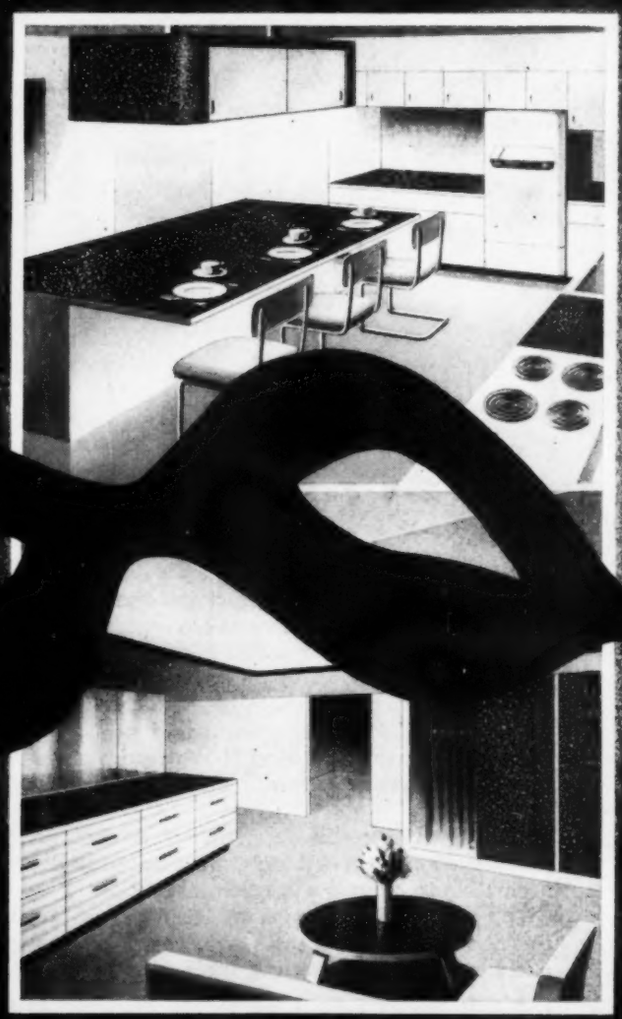
Per Rundberg, Architectural Designer, 3070 — 25th Ave., San Francisco, Calif.

Hector S. Scokin, Builder, Rivadavia 8261, Dept. B., Buenos Aires, Argentina.

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Brand-new MICARTA "Mardi Gras" was born to lend a carefree, festive atmosphere to all interiors. This high-pressure plastic laminate comes in a range of colors to match any decorative scheme. But most important, "Mardi Gras" like all MICARTA has its beauty locked for life beneath a tough, clear plastic sheet. For full descriptive literature, write: United States Plywood Corporation, 55 West 44th, New York 36, N. Y.

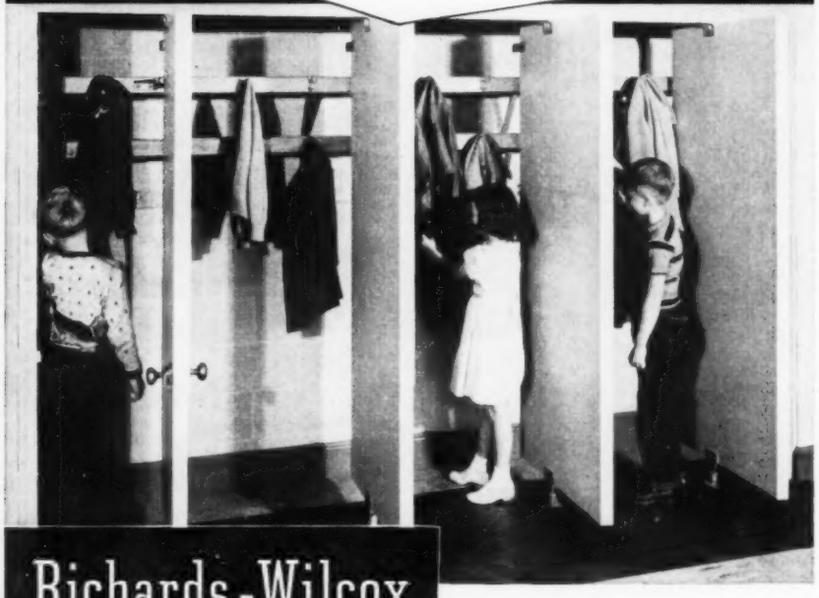
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WHERE JOHNNY HANGS HIS HAT...



Richards-Wilcox SCHOOL WARDROBES

Photo shows how entire interior of an R-W No. 833 Multiple-Action Master Control Door Wardrobe is instantly accessible, instantly exposed for airing, simply by opening master door.

We had Johnny in mind when we designed R-W school wardrobes. Johnny's health, comfort and convenience—not to mention his occasional frivolous moods—were all factors to be considered.

For instance, the problem of achieving maximum hygiene and comfort was solved by a unique system of doors. This system allows fresh air to circulate through the clothes. It helps reduce musty odors, keeps the wardrobe sanitary and allows damp clothes to dry quickly. And R-W Wardrobes have no inaccessible walls and corners. Cleaning's a snap, and they're easy to *keep* clean.

And what could be more convenient for youngsters than doors that open at a touch, with knobs and inside hooks easily accessible to even the smallest child.

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Richards-Wilcox School Wardrobes are manufactured according to three standard principles of operation:

Each type can be furnished with flush doors, coat racks, chalk boards, cork boards and other accessories.

1. Individual Door Operation—fully receding
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3. Multiple Door Operation



For complete information about Richards-Wilcox School Wardrobes, write to:

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Richards-Wilcox Mfg. Co.

"A HANGER FOR ANY DOOR THAT GLIDES"

116 THIRD STREET, AURORA, ILLINOIS

WASHINGTON

(*Continued from page 38*)

authorized to pay off projects for which applications were received prior to July 1, 1952 — Title II programming. The additional amounts authorized were for new programming during the next two fiscal years and included a $20 million item for schools in areas with heavy Indian populations. The new work comes under Title III, the Indian schools under Title IV.

The U.S. Office of Education estimates that $107 million will be required for the Title III provision, plus $10 million for military base schools. Congress set no dollar limitation here as it did for payments of back entitlements.

The fiscal 1954 appropriation was a last-minute compromise — the Senate had voted $84.5 million; the Administration had asked even more.

Of the $70.1 million final figure, $500,000 was to be assigned to the Housing and Home Finance Agency for technical (engineering) assistance in the construction of the schools.

AIR FORCE ADVISED TO UP ADVANCE PLANNING

At the same time that it denied the Air Force plea for $400 million in new building money, Congress advised more emphasis on advance planning and design of construction projects to form a better base for cost estimates and sounder judgments all the way through.

For the past three fiscal years, appropriations have been included in military construction bills for planning and design; and the Congress — through an Appropriations subcommittee of the House — commended the Air Force for making some progress in advance planning, but found room for improvement, and included the Army Corps of Engineers in its advice.

"The field is ripe for further efforts, both on the part of the Air Force and the Corps of Engineers," the subcommittee report stated. "Further emphasis on the advance planning of public works projects will not only provide Congress with more realistic cost estimates, but should have a salutary effect on the administrative lead time required between

(*Continued on page 304*)



Daylight Walls of *Thermopane* at Holy Ghost Fathers Seminary, Ann Arbor, Michigan. Arcnitect, Charles D. Hannan, Farmington, Michigan.

How to get spaciousness without buying space

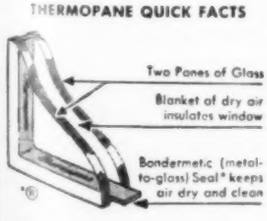
The space in a schoolroom can be measured in feet and its cost in dollars. But spaciousness is a feeling, and you can get it without enclosing unneeded space or spending extra dollars. See how this has been done in the room above. The clear glass Daylight Wall stretching from sill to ceiling opens the room into the world beyond.

Notice how the room is flooded with natural daylight. This cuts down on glare and contrast which cause eye discomfort. And it saves on illuminating costs. Daylight Walls are economical to build (no masonry, lath, plaster or paint), economical to maintain (glass is easy to clean and doesn't wear out). In the box below, you'll find facts on *Thermopane*® insulating glass which cuts heating costs and adds to indoor comfort in winter.

But most important, a Daylight Wall helps children to be happy; to see and enjoy the trees, the sky, the seasons. It banishes the cooped-up feeling that comes with walls that you can't see through.

If you'd like to read more authoritative facts on school lighting and construction, write for a copy of the booklet, *How to Get Nature-Quality Light for School Children.* Libbey·Owens·Ford Glass Co., 4193 Nicholas Bldg., Toledo 3, O.

THERMOPANE QUICK FACTS



Thermopane insulating glass is widely and successfully used. *Thermopane* with ½" of dry air hermetically sealed between two panes has twice the insulating value of single glass. This minimizes chilliness, drafts and heat loss at windows in winter. *Thermopane* cuts air-conditioning costs by reducing the amount of heat entering during summer. It cuts out 44% more noise than single glass. Write for *Thermopane* literature. Libbey-Owens-Ford Glass Company, 4193 Nicholas Building, Toledo 3, Ohio.

L·O·F GLASS · FLASKON · FIBER-GLASS

THERMOPANE • PLATE GLASS • WINDOW GLASS

DAYLIGHT WALLS

. . . THAT LET YOU SEE

OTHER L-O-F GLASS PRODUCTS: Vitrolite® · Tuf-flex® Tempered Plate Glass Tuf-flex Doors · Safety Glass · E-Z-Eye Safety Plate Glass · Fiber-Glass

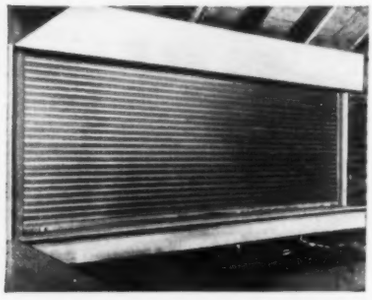
ANOTHER "NATURAL" FOR KINNEAR'S INTERLOCKING-SLAT CURTAIN

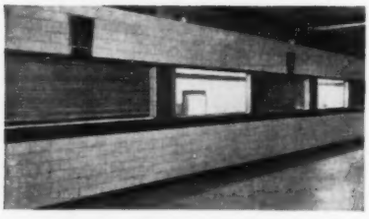


SPACE-SAVING COUNTER CLOSURE

BY THE MAKERS OF

Kinnear Metal Rolling Doors







Space-saving vertical action and "coil-away" storage make Kinnear's famous curtain of interlocking metal slats an ideal shutter or closure for all counter openings.

Slats for this versatile closure are available in various metals, in a choice of styles and sizes to suit any need or preference.

Proved in service openings of every kind *for more than half a century* this Kinnear curtain has many advantages.

It clears the opening *from jamb to jamb* as well as from top to bottom. It coils compactly above the opening – doesn't block light from above. All surrounding space is fully usable at all times – no swing-space needed. Wind can't slam or damage it. It is easily raised or lowered from inside the opening. It provides rugged all-metal protection against wind, weather, and intrusion . . . resists fire and accidental damage.

Adaptable to doorways and other openings of any size, the Kinnear interlocking-slat closure is easily installed. *Write today for full details.*

(The Kinnear Rolling Grille, an upward-coiling assembly of metal bars and links in an attractive open-work pattern, is also widely used as a barricade for counters and doorways.)

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KINNEAR ROLLING DOORS
Saving Ways in Doorways

THE RECORD REPORTS

WASHINGTON

(*Continued from page 300*)

appropriations and contracts. . . . Proper application of advance planning funds prior to requests for construction funds should improve the planning of the project prior to the appropriation request."

Minimum lead time was placed by Air Force witnesses before the subcommittee at six months, but it may run up to a year and averages out at around nine months.

The air base construction program got no new money; the Air Force was told to spend $240,776,000 from previously appropriated funds to keep the program going.

Testimony before the subcommittee had shown an Air Force spending rate which varied from $238 million in June 1952 to a low of $30 million in April of this year. In February, before the "freeze" for the budget review hit all government construction spending, a rate upwards of $350 million was established.

Congress was told the program would exhaust current appropriations as far as ability to award new contracts was concerned. Witnesses had asked that the $400 million sought be made available during the 1953 session of Congress to afford "an orderly buildup of facilities required for the 120-wing interim Air Force. . . ." Lack of new money would preclude the complete phasing out of contracting activities during the third quarter of fiscal 1954, they argued. Here again the long lead time played an important part in the Air Force request.

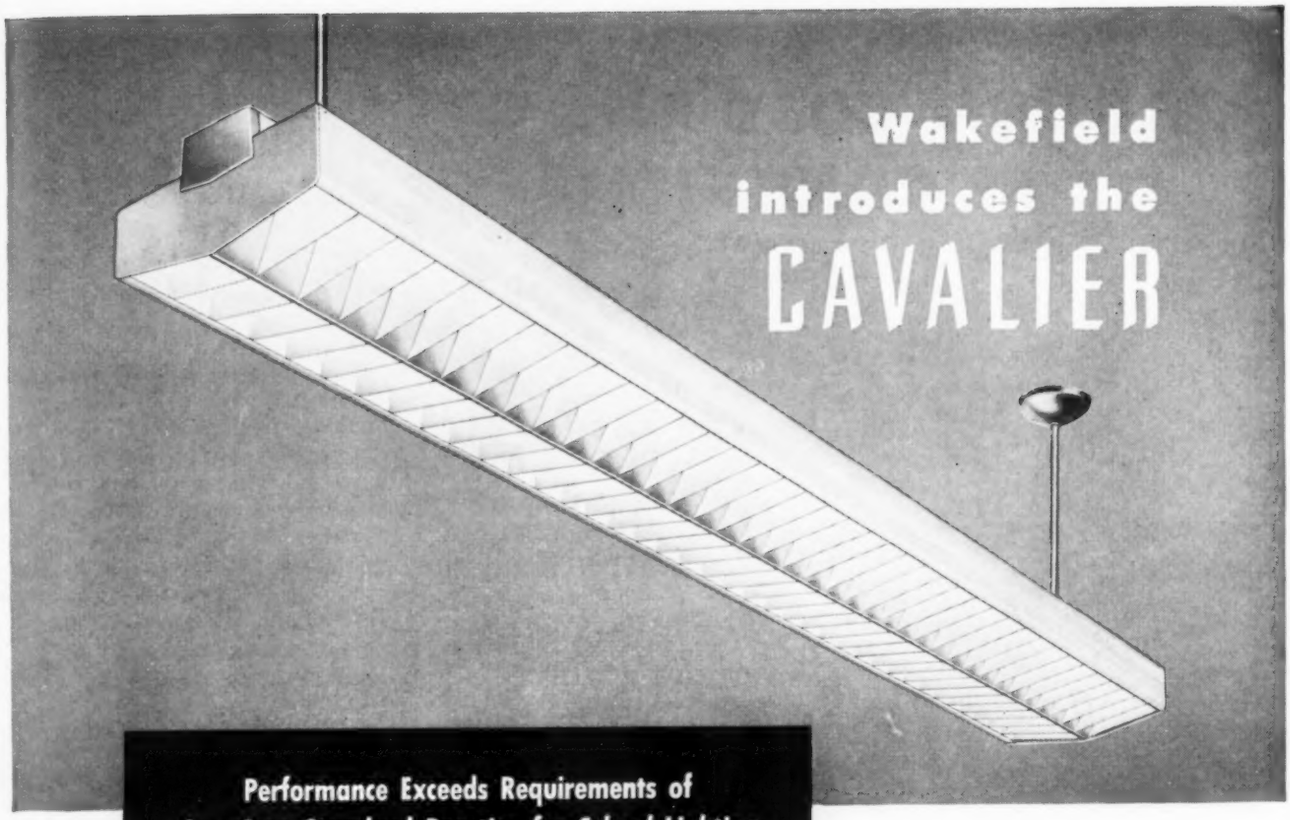
But the plea was unavailing.

The House heeded its committee's admonition that the Department of Defense must place additional emphasis on advance planning and the fixing of base facility requirements. The House action in denying funds followed committee recommendations that were, in turn, based on these criteria:

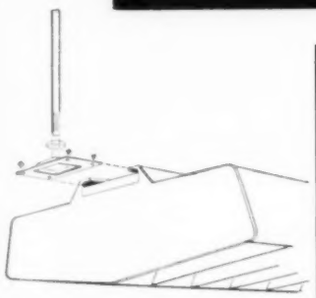
1. That maximum use should be made of existing unobligated and unexpended balances before new funds were appropriated.

2. That construction on Air Force installations should continue to be on the austerity standards, with emphasis placed on the construction of operational facilities.

(*Continued on page 306*)



Performance Exceeds Requirements of
American Standard Practice for School Lighting



Sliding stem plate can be moved from end to end to support the Cavalier at any point, completely eliminating problems of in-line spacing of mounting points.



For the complete story of this beautiful new streamlined direct-indirect luminaire, write for an 8-page 3-color folder. The F. W. Wakefield Brass Company, Vermilion, Ohio. In Canada, Wakefield Lighting, Ltd., London, Ontario.

Note that the brightness readings for the new Cavalier are well below the recommended maximums:

Zone	The Cavalier	Max. Recommended with Proper Refl.
60°–90°	100 ft.-L	450 ft.-L
45°–60°	250 ft.-L	900 ft.-L
0°–45°	1800 ft.-L	2000 ft.-L

Several important new design features are responsible for such excellent performances:

FIRST, the full length luminous plastic side panels have no opaque metal framing, but are supported internally by a steel frame. This frame is also an internal reflector, a feature which keeps side panel brightness down to a pleasant 100 ft-L.

SECOND, the louvers provide complete 45° x 45° shielding, or shielding at 45° x 25°. There is no view of lamp at specified shielding angles through the entire viewing cone.

THIRD, a special Wakefield low-brightness finish on louvers, side reflectors, panels and channels serves to keep brightness low.

Here then is an excellent new direct-indirect luminaire for your consideration when planning classroom lighting. There are two models, both equipped for Rapid Start or Slimline lamps, the Cavalier II (two lamps) and the Cavalier IV (four lamps).

Wakefield **Over-ALL Lighting**





ROUND COLUMNS of CONCRETE

FORMED WITH Sonotube® PAT. APP. FOR. FIBRE FORMS for one-time use

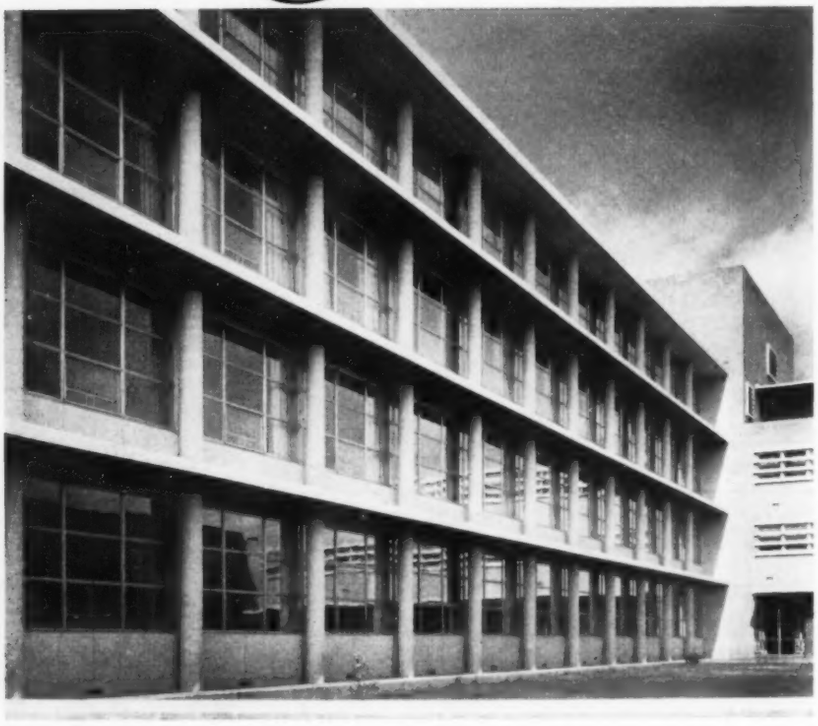


Photo By Jos. W. Molitor

Saves TIME!
Saves MONEY!
Saves LABOR!

Among the many outstanding projects all over the country which have used Sonotube-formed round columns of concrete is the beautiful LeBonheur Children's Hospital, Memphis, Tenn., pictured above. J. Frazer Smith & Associates, Architects and Engineers, Memphis; Harmon Construction Co., Oklahoma City, Contractor. SONOTUBE has been widely job-tested in forming columns, piers, piles, underpinning, etc. Up to 24' long or longer on special order. Technical data available.

1" UP TO 36" I.D.



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WASHINGTON

(*Continued from page 304*)

3. That the unit cost of depot-type warehousing should be limited not to exceed $6 per sq ft.

4. That purchase of additional land should be held to the minimum essential to operation of the base facilities.

The committee at the same time recommended a continuing review and strict enforcement on unit costs on standard and repetitive items. The Air Force was instructed to keep the committee informed of progress in that direction, especially concerning administrative and community facilities.

1954 PUBLIC HOUSING HELD TO 20,000 STARTS

The annual struggle for survival of public housing was tougher and less productive this year — the bill that finally emerged from Congressional conference limited starts in the current fiscal year to 20,000 units, compared with 35,000 last year, and prohibited any new commitments. The 20,000 units must come from existing contracts between the Public Housing Administration and local housing authorities.

FHA Administrator Charles E. Slusser immediately instructed his field offices to halt much of their operations until PHA could study the new law for application to the programs of its local housing authorities. The orders went:

(*Continued on page 308*)

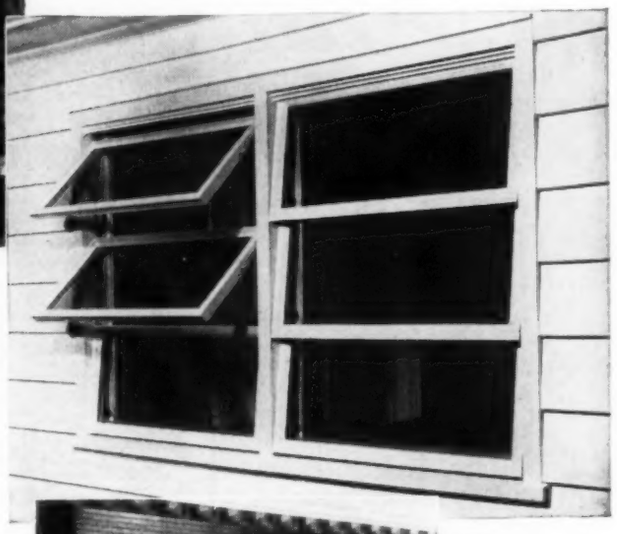


Charles E. Slusser, the new Commissioner of the Public Housing Administration, has been active in civic affairs in his native Akron, where he headed the Charles E. Slusser Agency Inc.



greater beauty and utility

Here's a new, fresh and interesting treatment in awning windows! Note how the sash are set at a pleasing angle, permitting a sturdy and well-proportioned sash and reducing sun glare and sound transmission.

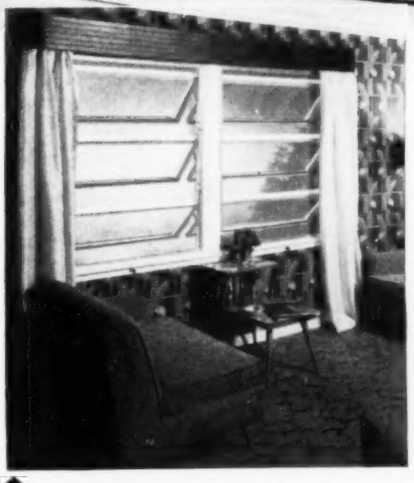


easily controlled operation

The bottom sash of the Silentite awning window may be opened slightly while upper sash remain closed. All sash may be mechanically opened or closed as desired. The opening process may be stopped at any point, and the bottom sash closed to prevent drafts.

Now Curtis Introduces striking new features in the Silentite Awning Windows

Constant improvement is a Curtis watchword. And so today, Curtis introduces new, exclusive features in an *all-climate* wood awning window—features of weathertightness, beauty, and positive control which make these windows outstanding in their field...



weathertight under all conditions

Spring leaf bronze weather-stripping is set in the head jamb—the rest of the unit is completely weather-stripped with durable, refrigerator-type plastic. Completely non-porous, this plastic weather-stripping fits snugly, creating a weather-tight seal under all conditions. The specially-designed hardware operating the sash permits unlimited ventilation control. Single crank below the window operates all sash, and sash are easily cleaned from inside.

Plus these and many other important new features...

A completely assembled unit—toxic water repellent treated—may be purchased open or with single or double glazing and aluminum screens—all frame parts interlocked for weathertightness—concealed, zinc plated hardware—pivot points are solid brass—large glass area with minimum of wood between sash—overlap sash affords deep shadow lines—units available in twelve sizes.

Get all the facts about Silentite Awning Windows—a new addition to the broad Curtis window line including Silentite double-hung windows and casements... picture windows . . . panel windows . . . circle windows. Mail the coupon!

Curtis Companies Service Bureau
Dept. AR-9, Curtis Building
Clinton, Iowa

Please send information about the new Curtis Silentite Awning Window—and other window styles.

Name.....

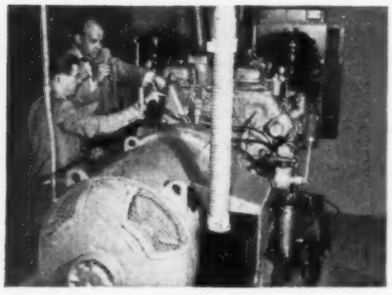
Address.....

City.....*State*.....

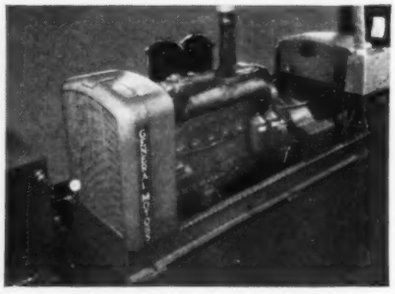
Curtis makes a complete line of architectural woodwork and birch kitchen cabinets for homes of all types. Make your next home "all Curtis."

1865 CURTIS WOODWORK
SILENTITE PRE-FIT
the *Insulated* window

GM DIESEL *Stand-by* GENERATOR SETS



WJR—Detroit, Michigan, uses 200 kw. GM Diesel generator set as stand-by power for 50,000-watt transmitter. Compactness of unit permitted installation in garage adjoining transmitter building—eliminating cost of a specially designed building.



WKTV—UTICA, N. Y., uses a 100 kw. General Motors Diesel generator set for stand-by power. Set can be started remotely from the control room. Low vibration characteristic of engine permitted installation in room adjacent to transmitter and within 30 feet of studio.

If you are planning stand-by power, be sure to check the advantages of General Motors Diesel generator sets, listed briefly below. GM Diesel generators are meeting the exacting requirements of military service in all parts of the world. They supply emergency power for more than 1100 telephone and telegraph exchanges—for microwave relay stations, for hospitals, government buildings, banks, airports. There is a GM Diesel distributor near you who will analyze your power requirements and make his recommendations without obligation. Look in the yellow pages of your phone book for his listing, or write direct to us.

- Wide range of models—12½ to 200 kw., 220 or 440 volts, single or three-phase current.
- Excellent frequency and voltage regulation for the most exacting requirements.
- Powered by General Motors Diesel engines—dependable, smooth 2-cycle operation—low cost maintenance—easy to service.
- Built by one manufacturer—one warranty, one responsibility for both engine and power generator.
- Instant push-button power starting on safe Diesel fuel—or fully automatic starting. Immediate power, no "warm-up" period.
- Dependable starting—no spark-ignition system to fail because of dampness or corrosion—always ready to start.
- Easy to install—compact—lightweight—requires no special building, no special base. Complete instrumentation provided.
- Distributors and Dealers throughout the country.

DETROIT DIESEL ENGINE DIVISION
GENERAL MOTORS • DETROIT 28, MICHIGAN
SINGLE ENGINES . . . 16 to 275 H.P. MULTIPLE UNITS . . . Up to 840 H.P.

It pays to Standardize on

Write for Generator Set Catalog 6 SA 20.

GM GENERAL MOTORS DIESEL POWER

THE RECORD REPORTS

WASHINGTON

(*Continued from page 306*)

"Pending determination of definitive policy for fiscal year 1954, local authorities with preliminary loan contracts should suspend all activities thereunder, incur no further obligations of any sort, and reduce current overhead to a minimum. Pending allocation of the projects to be authorized in fiscal year 1954, local authorities with annual contributions contracts for projects not yet authorized for construction should incur no further obligations for the acquisition of sites or for other major activities."

This year's housing debate began with the Administration's request for continuation of the program, pending completion of long-range studies on housing policy, with 35,000 new units in fiscal 1954. The Senate okayed this figure in its bill; but the House not only eliminated all starts for fiscal 1954 but adopted a committee recommendation that no new contracts were to be made either in fiscal 1954 or in any future years. The House intent as expressed in debate and later in conference with the Senate's representatives was to kill the program. The compromise figure of 20,000 units was accepted by the Senate only after House conferees had agreed the bill should state there was no intention of binding future Congresses to any public housing formula, for or against.

The compromise appeared to be "completely acceptable" to the President. A statement from Mr. Eisenhower read to the House during the final debate by its Majority Leader, Rep. Charles Halleck (R.-Ind.), went as follows:

"I have been informed that the conference committee appointed to adjust the differences between the House and Senate on this question have agreed to recommend 20,000 units for fiscal 1954, at the same time preventing the making of any contracts that would commit the United States for any future fiscal year.

"The new Commission on Federal-State Relations will undoubtedly go thoroughly into the question of the respective responsibilities of the states and the Federal Government in this field. Pending that Commission's recommendations, it seems to me that the conference agreement is a completely acceptable compromise between the positions of the two Houses."

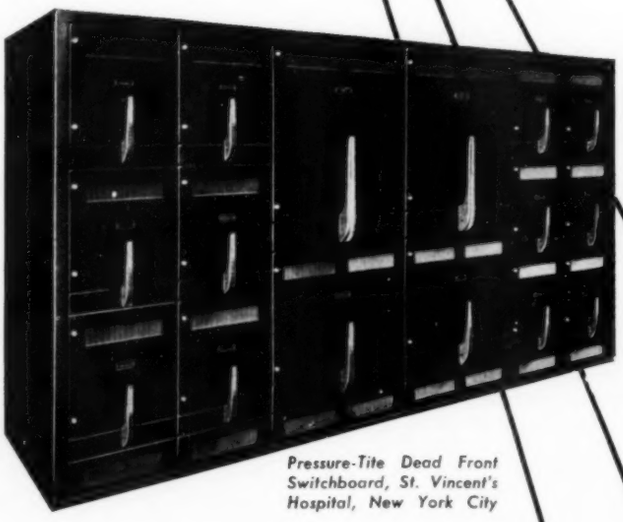
(*Continued on page 310*)

EYE OPENING
electrical equipment
Dependable-Safe-Economical

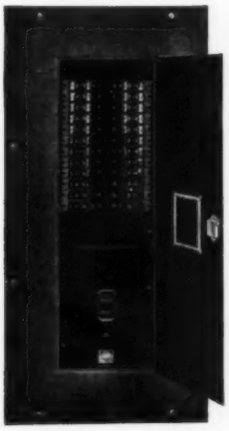
Switchboards · Panelboards
Lo-Ohm Safety Switches · Bus Ducts
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AND NOW
ALL NEW . . .

Lumi-Tron Stageboards
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Pressure-Tite Dead Front Switchboard, St. Vincent's Hospital, New York City



Type NAB Panelboard

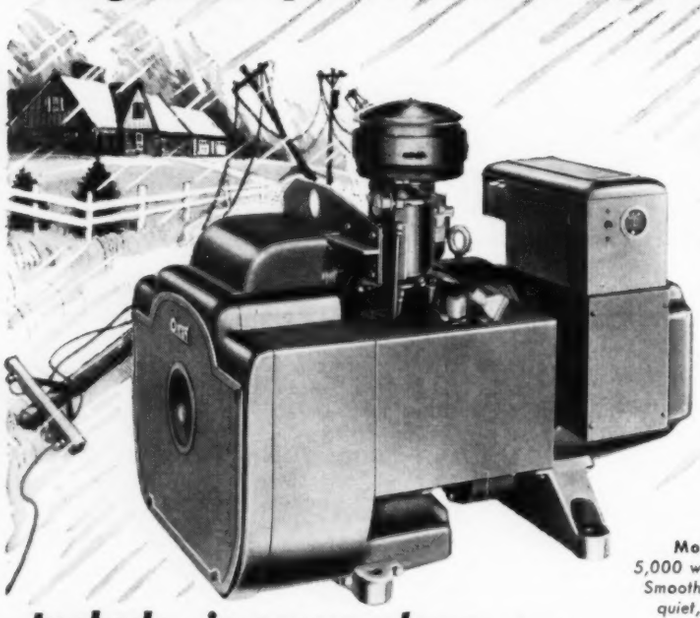
For over a half century, leading Architects and Engineers have specified Metropolitan Equipment as a means of insuring their client a finer product. Write for complete information on Electrical Equipment for your project.

61 Years

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General Offices
Long Island City 5, N. Y.

METROPOLITAN
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Specify built-in protection against power interruptions



Model 5CW
5,000 watts A.C.
Smooth-running,
quiet, compact

Include, in your plans, an ONAN *Emergency* Electric Plant

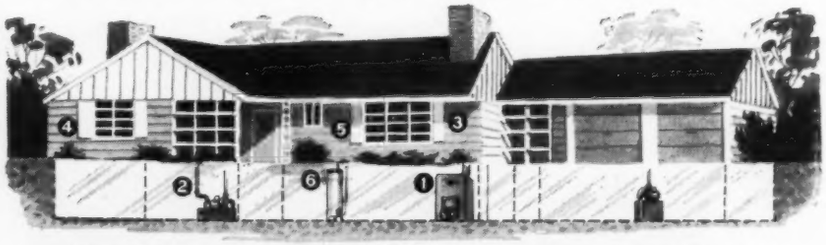
The homes you design become unlivable and even unsafe when storms, floods or other disasters interrupt electric power.

Suburban homes are especially vulnerable because of their complete dependence upon electricity. When power interruptions occur, these homes are without heat, water, refrigeration and lights. Freeze-ups and food spoilage can cause severe losses; fire hazards are increased.

You can insure the homes you design against power interruptions by specifying a low-cost Onan Emergency Electric Plant *in your plans.* When power interruptions occur, the Onan Electric Plant supplies regular 115-volt 60-cycle A.C. electricity for all essential uses *as long as the emergency exists.* Automatic controls start the Onan unit when power fails and stop it when power is restored; protect the home at night or when the family is away.

Very little space is required for installation in basement or garage. Hook-up to the wiring system is simple and inexpensive. Write today for folder describing Onan Standby Electric Plants, gasoline driven, 1,000 to 50,000 watts A.C. Helpful literature on installation and wiring is also available.

PROVIDES ELECTRIC POWER FOR THESE ESSENTIAL USES—



1. Automatic oil, gas or coal furnaces. 2. Electric water system. 3. Home freezer and refrigerator. 4. Lights, radio, etc. 5. Electric range (limited use). 6. Water heater.

Write for Standby Power Folder

Onan ELECTRIC PLANTS

D. W. ONAN & SONS INC.

7423 University Ave. S.E. • Minneapolis 14, Minnesota

THE RECORD REPORTS

WASHINGTON

(*Continued from page 308*)

The bill also called for an investigation of the entire public housing program, with a report to be made to Congress not later than Feb. 1, 1954. Some Senators took the view that under terms of the new law PHA could begin making new contracts after that date.

COLE STUDIES EVOLVING FUTURE HOUSING POLICY

The series of "shirtsleeve" conferences with representatives of housing groups, architects, builders and the public were continuing last month as Housing and Home Finance Administrator Albert M. Cole followed the President's direction to make a thorough study of the nation's housing problem before submitting recommendations for a new housing policy to be implemented by legislation at the next session of Congress.



HHFA Administrator Albert N. Cole chews a pipe at one of his "shirtsleeve" sessions on national housing policy

Out of the July series of sessions had come a batch of five industry committees organized to formulate for Mr. Cole's guidance a "firm presentation" of housing industry views on finance, public housing, slum clearance and urban redevelopment, research and statistics, and "fringe" programs of HHFA like prefabricated housing, Alaskan housing, disaster shelter, international activities, school construction and community facilities. These recommendations, advisory only, were to be presented to Mr. Cole by the end of last month.

(*Continued on page 312*)



INSTALLATION: Society for Savings, Barry Square Branch, Hartford, Connecticut.
ELECTRICAL CONTRACTOR: T. J. Martin Electric Co., Hartford, Connecticut.
ARCHITECT: Sherwood Jeter in collaboration with Hartford Electric Light Co.

FIXTURES: Litecontrol No. 5924 and 5928, 2 lamp slimline recessed troffer, 4 feet and 8 feet long, using No. 9015 Holophane lens. Also No. 6FH recessed lens boxes in Reception Area, and for accent.
SPACING: 7'-0" on centers.
CEILING HEIGHT: 10' approximately.
INTENSITY: 50 Footcandles average in service, over work area.

What Makes the LIGHT Right Here?

Three things — good layout, light floor and wall coloring, and efficient lighting by LITECONTROL.

Note the interior of this bank is clean, simple, inviting. No old-fashioned glass partitions to pick up bright reflections. No clutter of desk lamps or other supplementary fixtures to cast shadows and complicate the lighting problem.

LITECONTROL recessed fixtures 5924 and 5928 blend smoothly into the ceiling. The eight-foot units assure high level illumination over the work areas. Smaller four-foot units assure adequate illumination over light-colored floors in public area.

Holophane Low Brightness Lenses throughout prevent eye-tiring glare or sharp contrasts.

Interesting high-lights in the reception room are LITECONTROL Recessed Lens Boxes.

For information on how to make your lighting installations easy on the eyes, consult your local LITECONTROL man. Or write to address below.

LITECONTROL *Fixtures*

KEEP UPKEEP DOWN

LITECONTROL CORPORATION, 36 Pleasant Street, Watertown 72, Massachusetts

DESIGNERS, ENGINEERS AND MANUFACTURERS OF FLUORESCENT LIGHTING EQUIPMENT DISTRIBUTED ONLY THROUGH ACCREDITED WHOLESALERS

CORRECT

MILLER LEXINGTON *gives you* CORRECT *school lighting—improved quality of illumination provided by better lamp shielding—highest efficiency with extremely low brightness.* PLUS *the benefit of* LOW OVERALL COST, *brought about by engineering features that simplify installation and maintenance.* With the LEXINGTON you get more value for your lighting dollars. *Write for full details.*



DESIGN: *Functional—clean, simple lines.*



EASY *2-way lamping—1 ladder position.*



STRENGTH: *Rigid 1-piece steel louver.*



THE **miller** COMPANY *Meriden, Connecticut*
LEADERS IN LIGHTING SINCE 1844

THE RECORD REPORTS

WASHINGTON

(*Continued from page 310*)

Meantime, Mr. Cole made a whirlwind tour of the U.S. to hold "shirtsleeve" conferences in Chicago, Dallas, Omaha, San Francisco, Albuquerque and Fort Worth.

Some indication of the direction of Federal Housing Administration policy was given in a Chicago speech by Commissioner Guy T. O. Hollyday, who shared the platform with N.A.H.B.'s G. Yates Cook, housing rehabilitation director, at installation ceremonies of James C. Moreland as FHA director for the Chicago area. Mr. Hollyday declared that FHA needs "new tools" if it is to add its weight effectively to rehabilitation of blighted areas. He disclosed that surveys are under way in Chicago, Memphis and Cleveland as part of an intensive study seeking to uncover ways and means for increasing FHA effectiveness. The importance to slum clearance efforts of strict enforcement by local officials of housing ordinances was emphasized by both Mr. Hollyday and Mr. Cook.

VA GETS $17.5 MILLION, ORDERS TO SURVEY STATUS

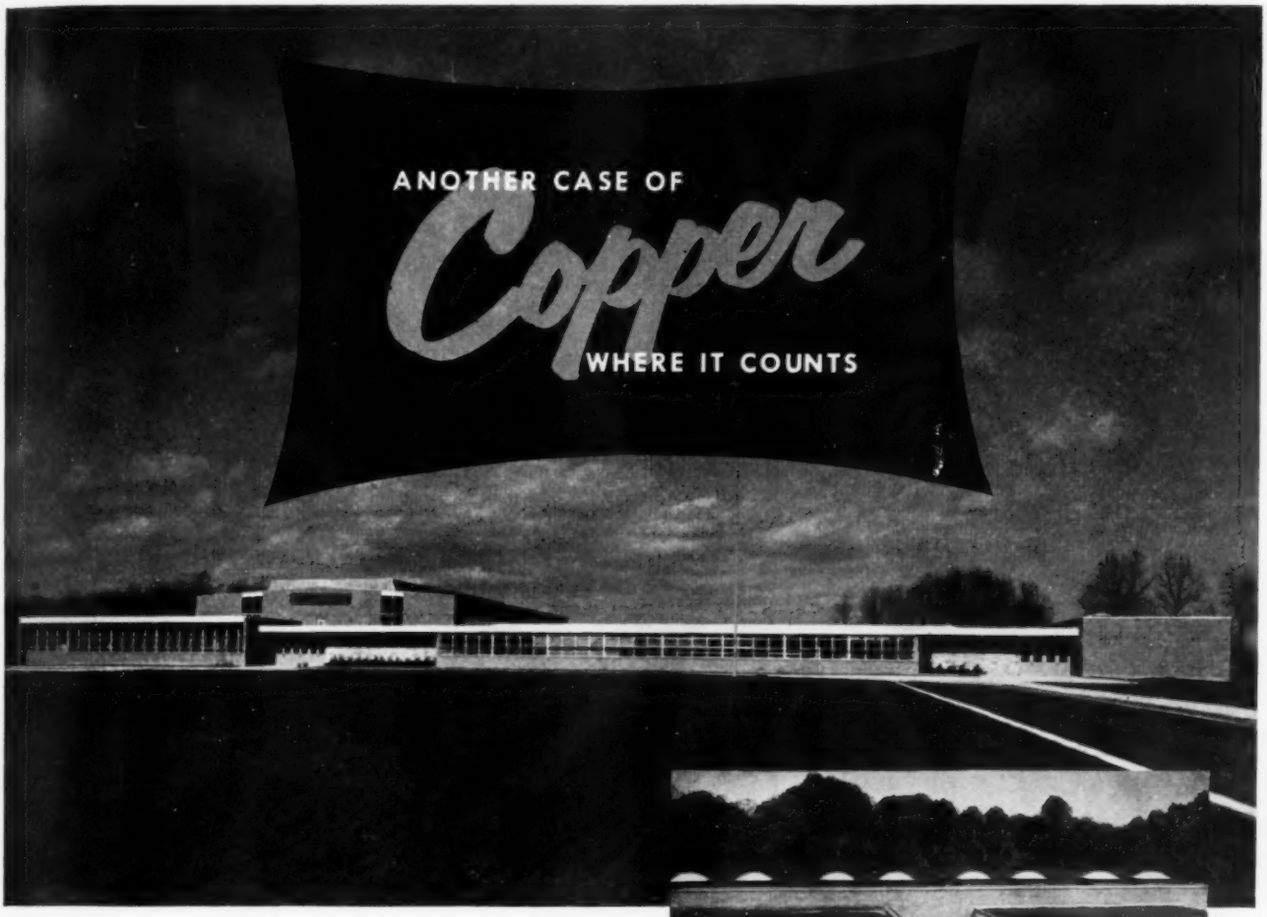
Funds for fiscal 1954 amounting to $17.5 million were appropriated by the Congress for the Veterans Administration, which in the same bill was directed to survey and make a comprehensive report to the Congress next February 1 on the status of all its property holdings. This will include both existing VA hospitals and sites in various stages of development.

Congress is under pressure to get the lands back on the local tax rolls and may force disposition.

There are at present 12 sites in the excess category, so described following the order of former President Truman some five years ago reducing the then-scheduled program by 16,000 beds. These were subsequently turned over to the General Services Administration for disposal by the regular formula — to be sold to the highest bidder, with government agencies getting first choice. But pressure was applied to halt the sales and GSA has since been holding the 12 sites until Congress makes a final determina-

(*Continued on page 314*)

GEORGE MASON JUNIOR-SENIOR HIGH SCHOOL, WASHINGTON, D. C.



Some architects still associate the ancient metal copper with cathedral spires, mansard roofs and dormer windows. But McLeod and Ferrara, architects for the George Mason Junior-Senior High School, and many other prominent architects, also see copper as the ideal metal for their most modernly designed structures.

Here's why: That copper endures has been proven for centuries. Its ductility makes it adaptable to any shape or design. Copper cannot rust or rot, never needs paint for protection. It improves with age, taking on a green patina that gives added protection and beauty. Sheet metal contractors prefer to work with copper because it is so readily workable and takes solder to perfection. And when you check the many features of copper you'll find it has more desirable construction characteristics than any other single metal or alloy. It's the metal that will keep you out of trouble.

So be sure your next job gets the many benefits of Revere Copper. See the Revere Distributor nearest you about Revere Sheet, Strip or Roll Copper for flashing. Particularly ask him about the money-saving advantages of Revere Keystone Thru-Wall Flashing.* **Patented*

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COPPER AND BRASS INCORPORATED

Founded by Paul Revere in 1801

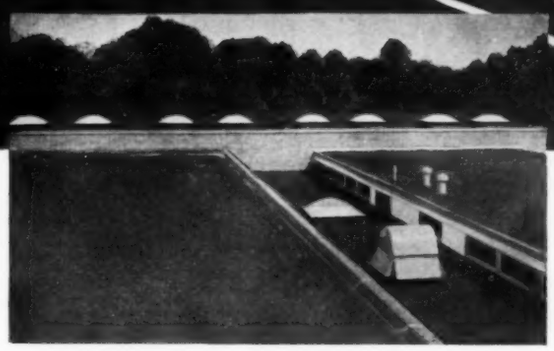
230 Park Avenue, New York 17, N. Y.

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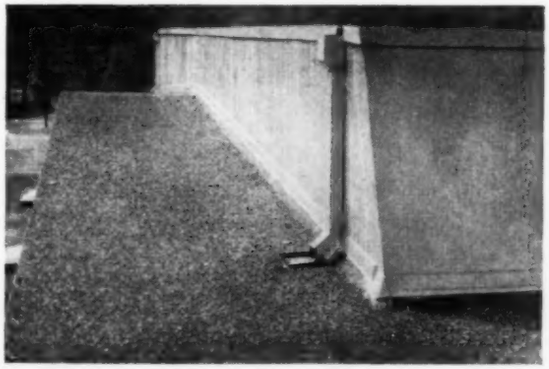
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LASTING PROTECTION for the vital spots on the roof of the George Mason Junior-Senior High is assured by the use of non-rusting Revere Copper for gravel stop facia, box gutters, downspouts, monitor skylights, expansion joints and miscellaneous flashing.



THE MATHY COMPANY, Sheet Metal Contractors, Washington, D. C., were pleased that Revere Copper was specified on this job because it is so readily worked and takes solder beautifully. 7,000 lbs. of Revere Cold Rolled Copper for flashing, gutters, downspouts, etc. 1500 lbs. of Revere Lead Coated Copper was used for the monitor skylights. Gravel stops are 20 oz. copper while all other is 16 oz. Revere Distributor, York Corrugating Company, Washington, D. C.



Like any healthy, sturdy trees, HARDWOOD flush Doors get their strength and durability from their *solid cores.* Such construction makes them ideal for most any building but particularly desirable for installations where hard knocks, abuse and heavy traffic are everyday routine as in hotels, schools, hospitals, institutions and office buildings. You'll experience no "holing-thru" from kicks and bumps with these doors because their face veneers, even when thin-skinned, are backed up with *solid strength.* In addition, they improve room acoustics by reducing sound transmission by approximately 30 decibels. For everlasting endurance and beauty, specify HARDWOOD DOORS. They reduce maintenance costs to *nil* — refinish to look like new, when desired. Write for details or consult ARCHITECTURAL FILE 16c/HA.

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America's finest doorway closure for reducing noise penetration — insuring room privacy. Send for new FREE brochure describing RIVERBANK doors in "easy-to-understand" non-technical language.



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THE RECORD REPORTS

WASHINGTON

(*Continued from page 312*)

tion. In addition the VA is holding four sites marked "status quo" on which no action has been taken following the Truman cutback. Another has been returned to its former owner and two are in process of being returned.

The $17.5 million will go mostly for completion of planning and start-of-construction work on three projects at San Francisco, Topeka and Houston. Actual start of construction is contingent on Budget Bureau approval.

BRAB PLANS CONFERENCE ON PORCELAIN ENAMEL

The Building Research Advisory Board has announced plans for the first in a series of conferences on a single type or class of building materials or products. The opening meeting in this series, November 12–13, will explore physical and chemical properties of porcelain enamel; it will be sponsored jointly by BRAB and the Porcelain Enamel Institute.

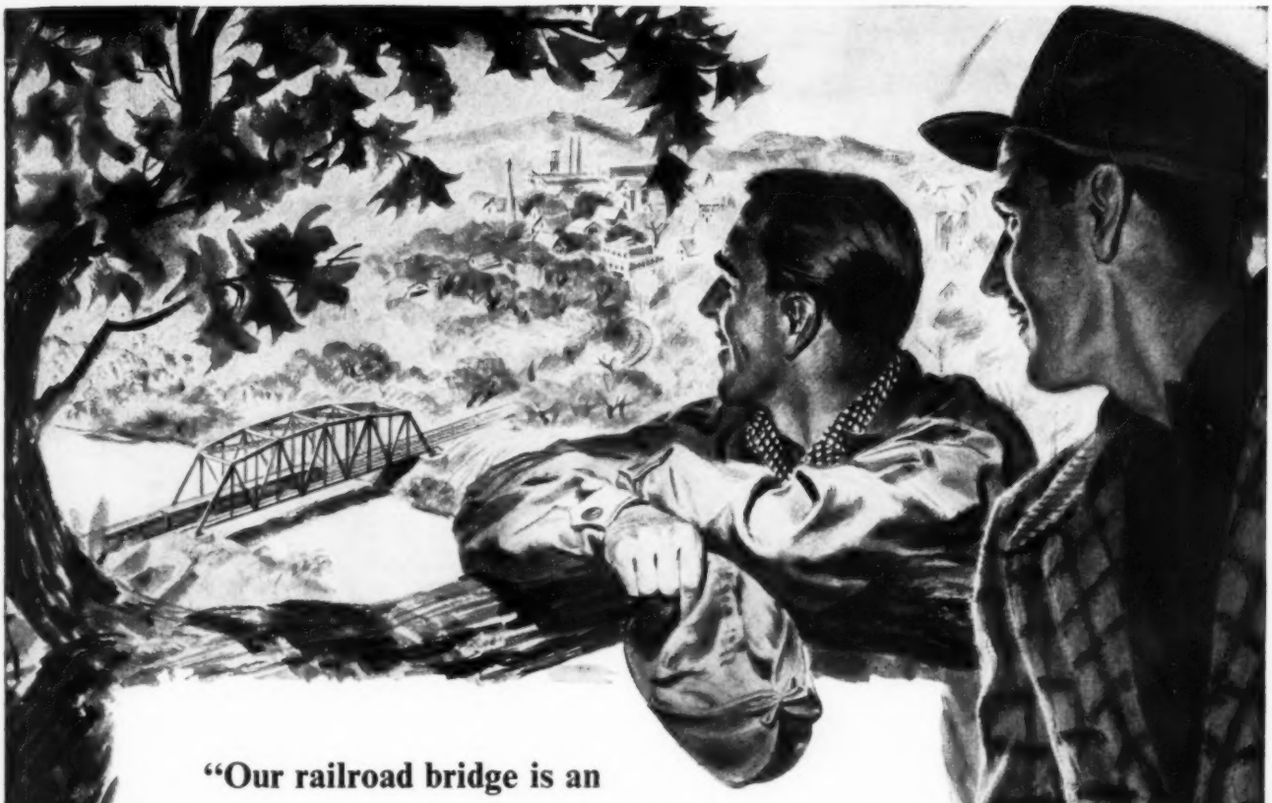
ADDENDA

• Some of the supporting facilities of the big new hydrogen bomb materials production plant at Savannah River, Ga., are already in operation, according to the 14th semi-annual report of the Atomic Energy Commission. Outlays for new plant and equipment in the first half of 1953 reached an average of $92 million a month, or three per cent of the total expenditure for new construction in the U.S. By early next year, when the rate is expected to peak at some $130 million a month, AEC construction spending will represent approximately five per cent of the U.S. total, the report estimates. At the beginning of this year, the nation's capital investment in atomic energy facilities was about $4 billion; another $3.5 billion in appropriations from 1953 and earlier years was as yet unexpended. AEC got $166 million for fiscal 1954.

Housing Notes

Why does substandard housing exist? G. Yates Cook, slum clearance veteran

(*Continued on page 316*)



"Our railroad bridge is an

EYE OPENER

for anybody with an assembly problem"

"Whether you're assembling toasters or bridges," Ken went on, *"it pays to set your sights on fasteners."*

"Fasteners?" asked Jack.

"Right!" affirmed Ken. *"We've saved plenty by taking the RB&W man's advice to switch from rivets to high strength RB&W bolts in assembling high stressed structural joints.*

"These bolts stay tight and that saves us maintenance. They assemble faster, and that saves us labor and construction time."

There's a cost-cutting lesson for you in this story, whatever your industry.* So look to your fasteners for an often overlooked opportunity to reduce costs, and strengthen your competitive position. New inventions, like RB&W's SPIN-LOCK Screw, may prove more efficient than the fasteners you're now using.** Or you may save by the stepped-up production you get from using the finest fasteners... RB&W bolts, nuts, rivets and screws of uniform accuracy, dependability and physical properties.

Let RB&W help you make the most efficient use of fasteners on your assembly line. Address RB&W at Port Chester.

RB&W—The Complete Quality Line. Plants at: Port Chester, N.Y., Coraopolis, Pa., Rock Falls, Ill., Los Angeles, Calif. Additional sales offices: Philadelphia, Pittsburgh, Detroit, Chicago, Dallas, San Francisco. Sales agents: Portland, Seattle. Distributors from coast to coast.

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*If you're interested in construction, write R B & W at PortChester for the free booklet, "High-Strength Bolts."

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Koroseal
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the same Material from Top to Bottom

for Maximum Wear

no coating — no lamination

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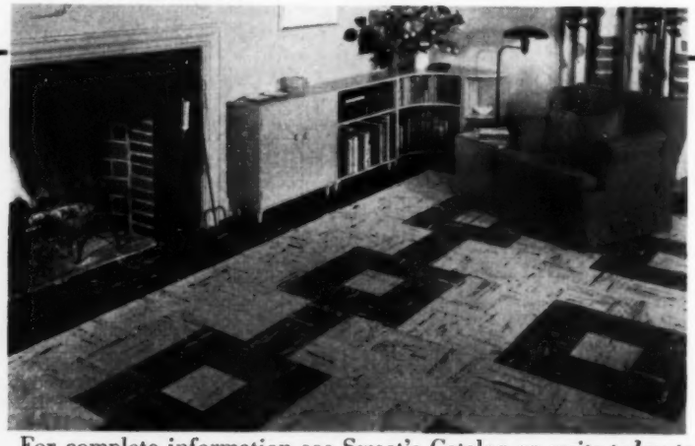
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Never Needs Waxing!
Develops a high lustre merely from the normal buffing action of walking feet.

Anti-Slip Surface!
Safe to walk on, always.

Defies Destruction!
Super-resistant to oils, fats, greases . . . acids and alkalies.

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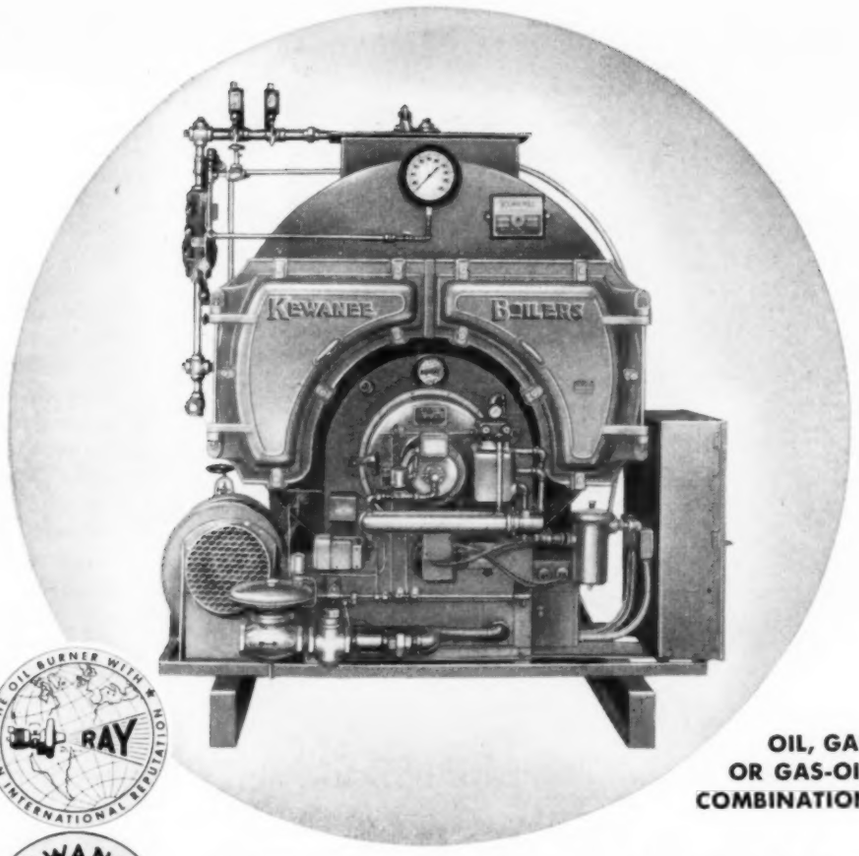
THE RECORD REPORTS

WASHINGTON

(*Continued from page 314*)

who is now housing rehabilitation director for the National Association of Home Builders, offered a recent housing officials' meeting these major reasons: (1) credit in the housing field is 100 years behind the times — persons living in slums can get credit easily for appliances, automobiles, TV sets and furniture, but it is difficult for them to arrange financing to repair their homes; (2) poor municipal housekeeping — many city officials, interested in politics to the exclusion of housing, avoid policy changes and pursue the same old course for years on end; (3) lack of law enforcement — Mr. Cook says law enforcement, as applied to housing, just doesn't exist in American cities; (4) community indifference — modern atomic weapons, observed Mr. Cook, can destroy a city in three seconds, but under present community attitudes it would take 100 years to rid a city of its slums and blight. . . . *The National Association of Home Builders* noted the dip in June housing starts as reported by Government agencies and asserted it indicates the need for lower FHA down payments before the dip becomes serious. The President has the power under the omnibus housing bill for 1953 to lower down payments — a move earnestly urged by the homebuilding industry for many long months — when the welfare of the building industry and the economy generally make it desirable. . . . *The latest "Construction Markets" newsletter* of the United States Chamber of Commerce charges that Federal mortgage programs have gone far afield from their original purpose, which was "intended to be auxiliary to normal private lending activities," to become, in effect, instruments for trying to coerce the market. The letter makes a number of recommendations, including the proposal that FHA and VA appraisal and inspection operations be limited to the extent required to provide "a reasonable minimization of their own risks." The agencies, says the Chamber, should not assume responsibility for detailed protection of the borrower or for guidance and supervision of the practices of lenders and builders. . . . *Federal Housing Administration Commissioner Guy T. Hollyday*

(*Continued on page 318*)



OIL, GAS
OR GAS-OIL
COMBINATION

A real advance in steam generation

KEWANEE-RAY
BOILER-BURNER UNIT

Produce steam more economically, more efficiently, with the new Kewanee-Ray Boiler-Burner Unit. Use heavy catalytic residual fuel oils or light oils in combination with high or low pressure gas in a single unit!

New multi-stage, forced draft, secondary air control on the burner provides a constant velocity air stream to the combustion zone. Resulting high turbulence, high turndown ratio and high CO_2 content give you high combustion efficiency.

Quickly Installed . . . Simple to Operate. Matching connections are provided so that when the boiler and burner are brought together they can be easily connected with a minimum of field effort. A flip of the switch and the unit goes to work on either oil or gas. To change fuels, flip the switch again. *That's all.* Fully automatic operation throughout.

The Kewanee-Ray Boiler-Burner Unit is *complete.* Boiler, burner, all automatic controls and accessories as specified. No special foundation is required. All refractories are integrally mounted at the factory. And a built-in forced-draft fan eliminates need for high stacks.

For High or Low Pressure Steam or Hot Water Heating. High pressure units, for 1350 to 15,800 lbs. of steam per hour developing 39 to 456 horsepower at 125 and 150 psi. Low pressure units for 15 lb. steam or 30 lb. water rated at 1,313,000 to 15,300,000 btu.

The complete boiler is shipped from Kewanee, the burner including windbox and control panel from Ray... so each shipment can be timed to arrive when you want it. The boiler should be on the job site before the new plant walls are up. (Exposure to weather does no harm). The shipment of the burner can be delayed until the new building is enclosed. Arrival of unit in two separate shipments is another important advantage when Kewanee-Ray is specified.

RAY OIL BURNER COMPANY 1306 San Jose Avenue, San Francisco, California

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Please send me your 16-page KR-1031 Catalog giving complete description and specifications on your Boiler-Burner Unit.

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The advanced design of the Burt F.E.F. (Free Exhaust Fan) Ventilator provides new higher capacities for rapid localized removal of air contaminated by smoke, fumes, dust and heat. Its features include:

UNOBSTRUCTED EXHAUST—Absolute free opening channels an unrestricted column of air vertically upward at high velocity.

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CAPACITIES TO 75,500 C.F.M.—Seven sizes and seventeen motor choices provide capacities from 5,000 C.F.M. to 75,500 C.F.M. See Sweet's for complete data or write for Bulletin SPV-18.

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THE RECORD REPORTS

WASHINGTON

(*Continued from page 316*)

day has revealed FHA is testing the "trade-in" house proposal of the National Association of Home Builders in the field in Columbus, Hartford and Shreveport. The trade-in idea would allow builders to take over old FHA-insured houses of prospective new-house-buyers with assurance of FHA mortgage insurance based on a valuation equal to the old FHA appraisal value of the old house plus the cost of FHA-approved improvements to be made by the builder. The buyer would get "credit" for his equity in the old house to use in lieu of down payment on the new house. FHA officials believe such trade-ins would both stimulate sales of new houses and encourage improvement of old properties. . . . *Federal rent controls* ended July 31 for an estimated 5.4 million rental units, most of which had been under continuous control for more than 11 years. "Local option" controls — in cities which did not choose to drop World War II Federal rent controls by local ordinance after the war — ended for an estimated 4.5 million units; a tighter definition of "critical defense areas" freed an additional 900,000 units in the Government control program initiated shortly after the outbreak of the Korean war. Controls will end on this last small group, estimated at 118,000 units, next April 30. . . . *The Veterans Administration* direct loan program, to aid veterans in the purchase or construction of houses and farmhouses where private financing is not available, has been extended for one year to June 30, 1954. . . . *HHFA Administrator Albert Cole* last month announced a new interest rate of 3½ per cent for college housing loans, in accordance with provisions of the Housing Amendments of 1953, which empower the Administrator to set the rate for college housing loans at not less than the average yield on outstanding Government obligations with a maturity of 15 years or longer. Previously the rate was established by statutory formula under which fluctuations in the rate could occur from month to month. . . . *Interest rates on FHA debentures* have been increased — for 10-year issues, to 2¾ per cent; for longer-term issues, to 3 per cent. "In the current money

(*Continued on page 322*)



Instead of using permanent **cast iron soil pipe** for his house sewer, he was shown how to "save" money. He was sold a newer material and it worked fine – for a few years. Then it failed, and had to be dug up and replaced. Expense . . . inconvenience . . . and the loss of some favorite and costly shrubs.

It's a natural thing for people, building their first homes, to want to save money on things that don't show, and put the money "saved" into things that are seen each day. But that is the time for you to recommend cast iron, which *really* saves future expense.

USE PERMANENT CAST IRON SOIL PIPE

When **cast iron soil pipe** is installed, the work has to be done by a journeyman plumber. He is an expert at making joints caulked with oakum and sealed with molten lead. Such joints are root tight, flexible and leakproof for lifetimes to come. Cast iron won't warp, soften, chip or loosen up when soil settles.

In fact, when it comes to plumbing drainage, the only time-proved material is cast iron. Whenever you convince a home builder to use **cast iron soil pipe** the result is a better building . . . and an enhanced reputation for you – a man who holds out for the best.

This advertisement is sponsored by:

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Like so many others . . .

The builders of Place Homes* are SOLD on...

GLIDE-ALL *Sliding Doors*



"They Save Us Time and Money"
...Says Mr. Robert B. Place: President, Place Homes, Inc.

"In our business time is really money, so one of the first things that interested us in Glide-All Sliding Doors was the fast, easy installation.

"The extra, easily accessible closet space these durable, trouble-free doors provide gives our homes an important plus feature at relatively low cost."

You and your customers will applaud the advantages of Glide-All Sliding Doors, too. They are available in overhead hanging roller or bottom roller types. 8′ floor-to-ceiling or 6′8″ standard heights.

Write us today for the complete details and literature.

*Place Homes Inc., South Bend, Indiana, are manufacturers of pre-cut, packaged houses sold through franchised builder-dealers throughout the midwest.



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Glide-All Sliding Doors are Easiest to Install • • As Easy as

A Top track is easily mounted on ceiling with screws.

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They provide easier-to-use closet space

They complement the design and beauty of any home

They're well named for they glide smoothly and easily

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WASHINGTON

(*Continued from page 318*)

market conditions," said the FHA announcement, "an upward adjustment in debenture interest rate was felt necessary in order to bring the yield on FHA debentures to a level comparable with that of similar securities."

Appointments

• Walter W. McAllister of San Antonio is the new chairman of the Home Loan Bank Board, a unit of the Housing and Home Finance Agency. Mr. McAllister, who has been president of the San Antonio Savings and Loan Association, succeeds William K. Divers. Mr. Divers will continue as a minority member of the three-man bipartisan board.

• John Hazeltine of Los Angeles, assistant manager of the construction and maintenance department of the Richfield Oil Corporation, has been appointed Commissioner of Community Facilities and Special Operations in the Housing and Home Finance Agency. He succeeds Pere F. Seward, who will remain with the agency as Assistant Commissioner of Community Facilities and Special Operations.

• Franklin G. Floete of Des Moines has been named to the post of Assistant Secretary of Defense in charge of property and installations — one of six assistant secretaries provided under the Defense Department reorganization scheme which became effective July 1. Mr. Floete takes over the office which has been headed by Frank R. Creedon under the title Director of Installations as a virtual watchdog over all military construction matters. It was thought Mr. Creedon might continue to serve under Mr. Floete.

• Harvey V. Higley has succeeded Carl Gray as Administrator of Veterans Affairs. Mr. Higley, a native of Ohio, has been chairman of the Board of the Ansul Chemical Company, Marinette, Wis. During World War I Mr. Higley served as a first lieutenant in the Army's Chemical Warfare Branch; he has two sons who are Navy veterans, and a third son was killed during World War II while serving with the Navy.

(*More news on page 328*)



This spacious ballroom in the Frederick Martin Hotel, Moorhead, Minn., is a popular rendezvous in the Moorhead area. *Architect:* Thorsov and Cerny, Minneapolis. *General contractor:* Standard Construction Co., Minneapolis.



The Frederick Martin Hotel is built of brick veneer over reinforced concrete. Bethlehem supplied the reinforcing steel for the entire building.

Adjacent to the ballroom is this attractive dining room called, appropriately, the Tree Top Room.



HOTEL BALLROOM HAS 3200 SQ FT OF UNOBSTRUCTED FLOOR SPACE

An ideal solution to a space problem often present in the smaller hotel is illustrated by the Frederick Martin Hotel in Moorhead, Minn. In this 7-story building, containing 111 guest rooms, the main ballroom was placed on the top floor, under the roof, where its generous size would impose no restrictions on other public rooms or guest rooms nearer the ground level.

Known as the Top o' the Mart, this attractive ballroom is available for dances, exhibits, conventions or private parties. It can accommodate 600 people as a meeting area, or 400 people at a banquet. Its 3200 sq ft of floor space is unobstructed, completely free of columns—made possible by the use of 40-ft Bethlehem Longspan Joists in the roof structure.

In such special installations as the Frederick Martin Hotel—or in factories, garages, stores, and similar buildings—the use of Bethlehem Longspans as roof supports lets you reduce columns to the fewest possible, so you can make the best use of every square foot of floor space. These joists save construction time, too, for they reach the job completely fabricated, clearly marked and ready for placing. And in masonry construction they reduce the need for pilasters which often interfere with wall design.

Bethlehem Longspans are good joists to remember when you plan your next building where efficient use of interior space is a paramount consideration. The nearest Bethlehem sales office will be glad to give you complete information; or write direct to us at Bethlehem, Pa.

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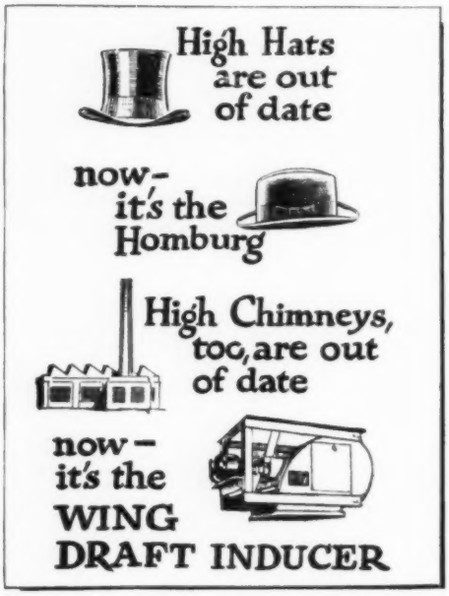
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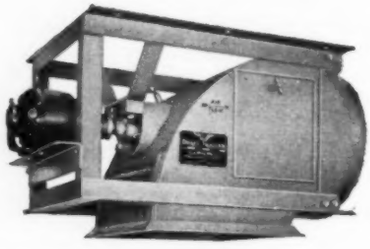
REGARDLESS OF WIND, WEATHER OR LOCATION—AND

WITHOUT TALL, UNSIGHTLY STACKS

BY THE USE OF

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YOU GAIN THESE ADVANTAGES:

- **Exact Draft with Precise Control**
- **Substantial Savings in Maintenance**
- **Ease in Installation**

The advantages of mechanical draft over natural draft are tremendous. Draft produced by stack or chimney is seldom reliable, varying according to weather conditions. The motorized draft inducer makes its own draft regardless of weather conditions or variation in load. The necessity for tall, ugly, expensive stacks is eliminated, permitting the architect to design a more attractive building. Write for a copy of Bulletin I-52.

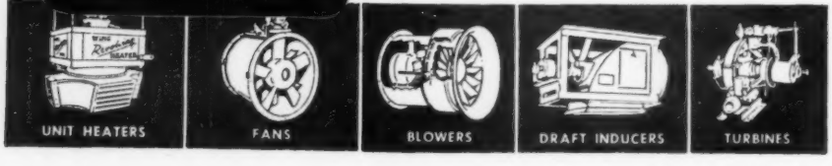
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THE RECORD REPORTS

Public Relations *(Cont. from page 11)*

responsible for attractive *Star-News* ads, billboards, bus and street-car showcards in March and April bearing this important legend: 'Planning to build? . . . Pasadena's architects and builders are among the country's finest.' . . ."

"Eleven members of the Dallas Chapter worked on *The Vacation Home*, the model home born from their television show, 'So You Want to Build.' Press coverage on this project was top flight with the public now better informed about the local architects involved, the valuable services of an architect, and the existence and worth of the A.I.A. . . ."

"The Kansas City Chapter devoted its June *SKYLINES* to a public relations issue, an idea we would like to see taken up by other chapter publications sometime during the Autumn or Winter months. Included was an admirable list of public relations objectives for the future. One of the best of these was the renewal of K.C.'s Speakers' Bureau. A convenient Facts Pack is being prepared for member speakers, built on such public interest subjects as *New Schools For Your Children* and *The Master Plan of Greater Kansas City*."

Our fourth project for the first year of the program is now in preparation for late autumn publication — a "Handbook for Architects," covering public and professional relations for the *individual* architect.

By next year local participation in the national public relations program should be stronger. With this knowledge, first-year projects will be continued and revised and these two major ones added: (1) a community service club program, and (2) a national school program. The latter, to be launched through local A.I.A. chapters, will include an easily assembled exhibit for school programs, plus student-level booklets and brochures for classroom use. Both projects help further identify the architect and his services in the community.

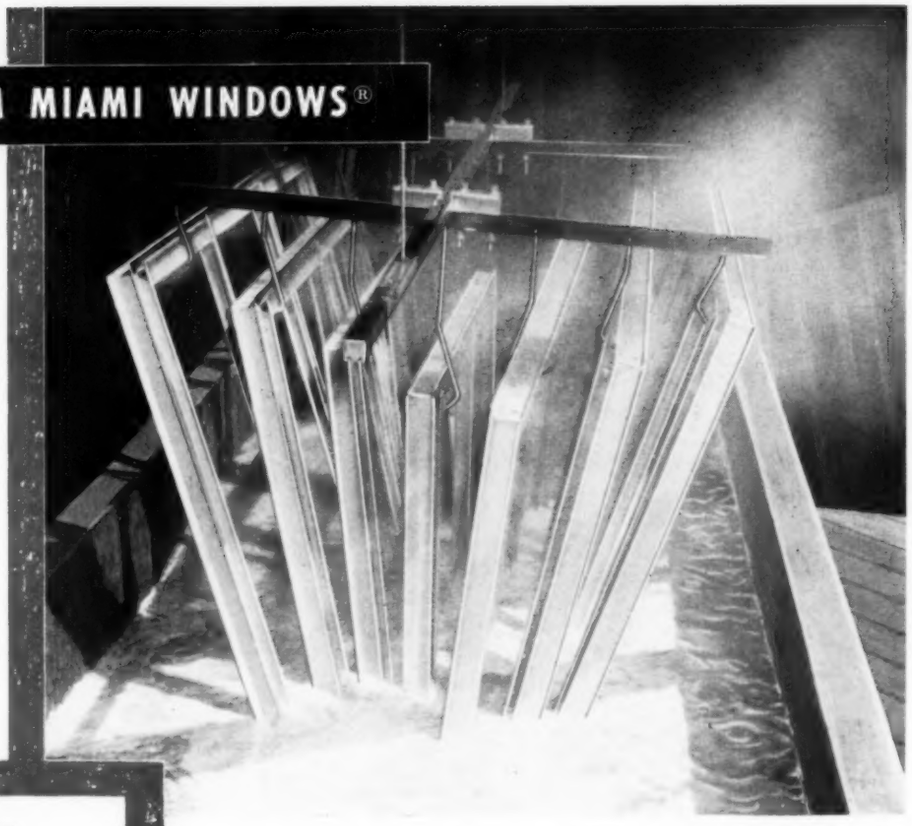
As effective participation in the national public relations program grows and chapters increase their use of public relations resources, they will be preparing for most effective use of the major project of the third year: an A.I.A. motion picture. The public relations value of the kind of motion picture which is planned has already been recognized

(Continued on page 326)

now...

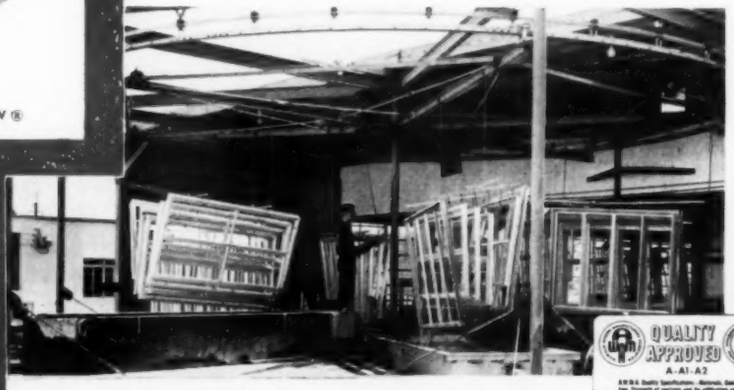
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THE RECORD REPORTS

Public Relations *(Cont. from p. 324)*

by many members of the A.I.A. We could not honestly recommend the production of this film until the third year. The film would be worthless unless it were done professionally, enlisted widespread interest, and most important of all, reflected the true character of the profession. The projected film, to be shown in all the various chapter-communities, will show the architect at work as a builder, professional man and citizen.

By all indications, the first year's program has done much to create an atmosphere for effective public relations among members of A.I.A. As the A.I.A. Board of Directors reported to the 1953 annual convention in Seattle this past summer: "The public relations program is well underway and excellent cooperation between public relations counsel and the various elements of the Institute is reported. . . ."

As in all programs of this nature, once they get underway, new opportunities keep turning up. One of these will enable the Producers' Council to tie-in with the Institute public relations program. At the semiannual meeting of the Council in Seattle, Mr. Megronigle urged Council members to get their thousands of distributors and dealers across the country interested in stimulating better design and better building, thus encouraging more work for architects in the community. He further suggested that a committee of the Producers' Council meet with the Institute's Public Relations Committee to talk over some workable plan of action. Work is going ahead on both suggestions.

Another extra: to recognize and encourage writing and photography that will further a public understanding of architecture and the architect, the Institute recently set up a series of journalism awards totalling $1500 to be awarded in prizes of $250 for the best published work in each of six categories.

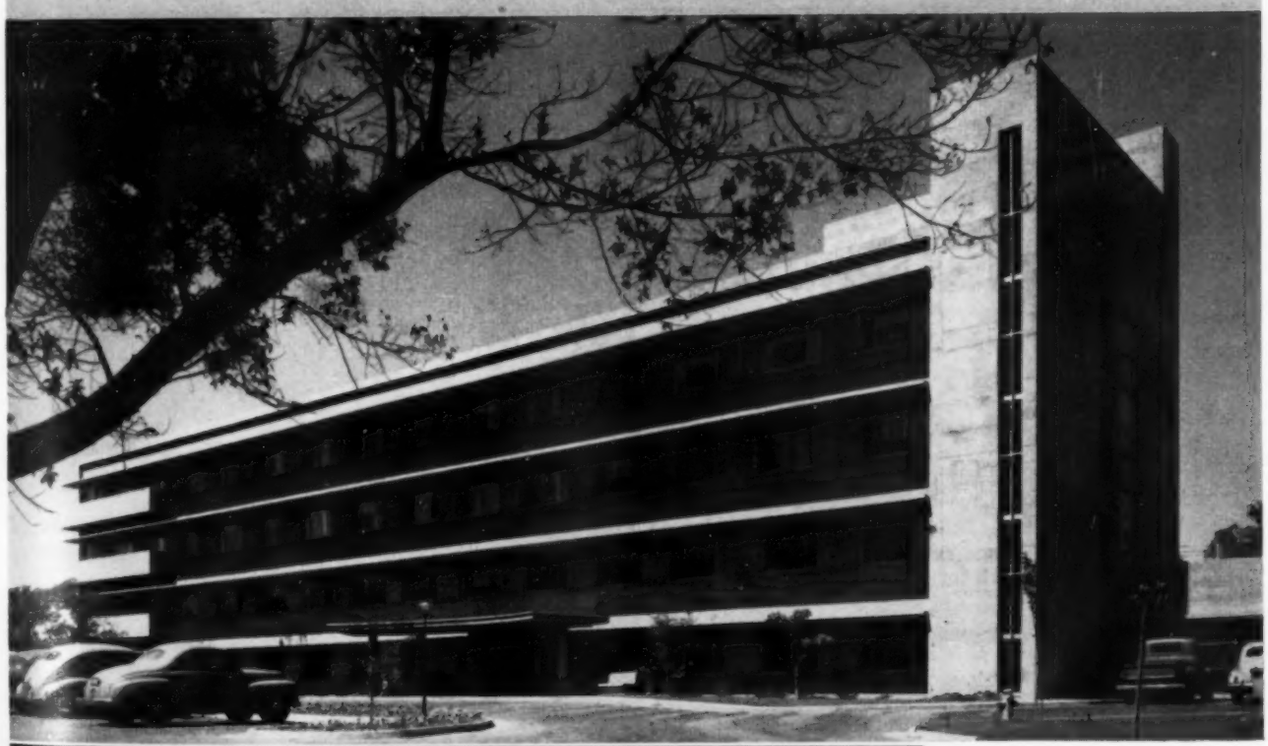
All of these projects aim at identifying the architect and his work in the community. But they and the whole public relations program are planned to *capitalize* on the basic public relations job, which we all recognize is always done by the architect himself, as he does his best job for his client. It is an old but worthwhile axiom that rings out "Public relations begins at home" — in this case in the architect's office — in his services to his clients.

More and more, hospital designers are turning to reinforced concrete frames and floors, because reinforced concrete costs less. Construction time is important, too, and reinforced concrete buildings *go up faster.*

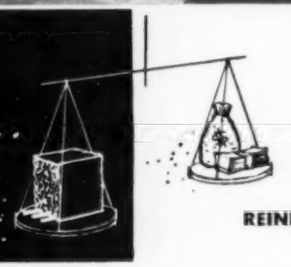
Reinforced concrete is inherently firesafe. It offers rugged strength that is highly resistant to wind, shock, and quakes. It permits great flexibilty of design. And materials are readily available from local sources.

These are reasons why reinforced concrete is so popular today. Whatever your next building may be—design it for reinforced concrete.

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Architect:
Robert Stanton, A. I. A.
Structural Engineer:
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For *all* members of the family, from infancy to old age—invalid or well—Weisway Cabinet Showers provide the most practical and adaptable bathing facilities. In the installation pictured above the seat folds against shower wall; diverter valve provides normal shower at regular shower height.

With the "growing children" combination fixture, sketched at the left, back-bending drudgery is eliminated for mother and the protective curtain keeps water inside.

Weisways bring the enjoyment of modern shower bathing to homes of every size and price class—*provide extra baths in a three-foot square or less!* Guaranteed leakproof construction . . . foot-grip, no-slip floor of vitreous porcelain enamel . . . precision manufacture assure dependable service through the years.

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Please send Weisway Catalog with detailed information.

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THE RECORD REPORTS

(*Continued from page 326*)

ON THE CALENDAR

Sept. 4–13: Third Annual European Machine Tools Exposition — Brussels.

Sept. 14–17: International Congress of Industrial Design — Paris. Information from: Secretariat General, Congress International d'Esthetique Industrielle, 28, Rue Saint-Dominique, Paris, France.

Sept. 14–17: National Technical Conference, Illuminating Engineering Society — Commodore Hotel, New York City.

Sept. 17–19: Gulf States A.I.A. Regional Conference; theme, "Serving the People of the South through Architectural Progress" — Biloxi, Miss.

Sept. 17–27: National Furniture and Homefurnishings Show — Grand Central Palace, New York City.

Sept. 18–19: Annual convention, Pennsylvania Society of Architects; Central Pennsylvania Chapter, A.I.A., hosts; theme, "Research — and Things to Come" — Lancaster, Pa.

Sept. 18–19: Meeting of Great Lakes Regional Council — Statler Hotel, Detroit, Mich.

Sept. 20–27: National Home Week, sponsored by National Association of Home Builders.

Sept. 21–27: Third U.I.A. Congress — Lisbon, Portugal. Details obtainable from Union Internationale des Architectes, 15 Quai Malaquais, Paris.

Sept. 23–Nov. 29: Good Design. Selections from the 1953 exhibition in Chicago — Museum of Modern Art, 11 W. 53rd St., New York City.

Sept. 29–Oct. 2: National Electrical Industries Show — 69th Regiment Armory, New York City.

Sept. 30–Nov. 22: State Department Architecture. Models, drawings and photographs of approximately eight buildings in Europe — Museum of Modern Art, 11 W. 53rd St., New York City.

Oct. 1–4: First convention and exposition, New York State Home Builders Association — Waldorf-Astoria Hotel, New York City.

Oct. 4–25: Exhibition of "Contemporary Swiss Architecture," assembled by Alfred Roth — Addison Gallery of Art, Andover, Mass.

Oct. 5–7: Fall meeting, American Association of Mechanical Engineers — Hotel Sheraton, Rochester, N. Y.

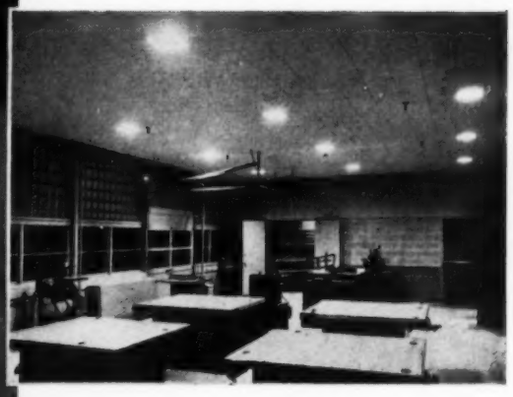
Oct. 5–9: Semiannual Conference, So-

(*Continued on page 330*)

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THE RECORD REPORTS

(*Continued from page 328*)

ciety of Motion Picture and Television Engineers — Hotel Statler, New York City.

Oct. 5–9: National Hardware Show — Grand Central Palace, New York City.

Oct. 6–8: Fourth Industrial Electrical Exposition — William Penn Hotel, Pittsburgh.

Oct. 6–8: Annual Convention, National Hardwood Lumber Association — Hotel Sherman, Chicago.

Oct. 6–9: Second Annual International Churchman's Exposition — Coliseum, Chicago.

Oct. 7–Jan. 3: Leger; more than 100 paintings — Museum of Modern Art, 11 W. 53rd St., New York City.

Oct. 8–9: American Council on Education — Washington, D. C.

Oct. 8–10: Convention of New York State Association of Architects — Lake Placid Club, Lake Placid, N. Y.

Oct. 8–10: Annual convention of the Structural Engineers Association of California — Ahwahnee Hotel, Yosemite, Cal.

Oct. 9–11: Northwest Regional Convention, American Institute of Architects — Sun Valley, Idaho.

Oct. 11–16: 83rd Congress of Correction, American Prison Association — King Edward Hotel, Toronto, Ont.

Oct. 14–16: Annual convention, Architects Society of Ohio — Youngstown, Ohio.

Oct. 14–17: Convention of the California Council of Architects — Coronado Hotel, San Diego, Cal.

Oct. 16–Jan. 4: Designer-Craftsmen U.S.A. 1953, an exhibition — Brooklyn Museum, Eastern Parkway, Brooklyn, N. Y.

Oct. 19–21: 35th Annual Meeting, American Standards Association — Waldorf-Astoria Hotel, New York City.

Oct. 23–24: Fourth National Noise Abatement Symposium — Chicago.

Oct. 25–27: Fall meeting, Prefabricated Homes Manufacturers Institute — Hotel Shamrock, Houston, Tex.

Oct. 26–29: Annual convention, American Gas Association — Kiel Auditorium, St. Louis.

Oct. 29–30: Southwest Regional Meeting, American Concrete Institute — Rice Hotel, Houston, Tex.

Nov. 2–6: Fall general meeting, American Institute of Electrical Engineers — Muelebach Hotel, Kansas City, Mo.

Nov. 4–6: 14th Annual Convention, Texas Society of Architects — Austin.

Nov. 4–6: 17th National Time and Motion Study and Management Clinic — Sheraton Hotel, Chicago.

Nov. 8–14: Annual convention, National Association of Real Estate Boards — Statler and Biltmore Hotels, Los Angeles.

Nov. 9–12: National Electrical Manufacturers Association — Haddon Hall Hotel, Atlantic City, N. J.

Nov. 9–12: Eighth All-Industry Refrigeration and Air Conditioning Exposition — Cleveland Public Auditorium, Cleveland.

Nov. 13–19: Annual convention and home show, Mortgage Bankers Association of America — Miami, Fla.

Nov. 18–Dec. 2: 1953 Building Exhibition — London.

Nov. 19–21: Annual convention, Florida Association of Architects — Huntington Hotel, St. Petersburg.

Nov. 29–Dec. 4: Annual meeting, the American Society of Mechanical Engineers — Statler Hotel, New York City.

(*Continued on page 332*)



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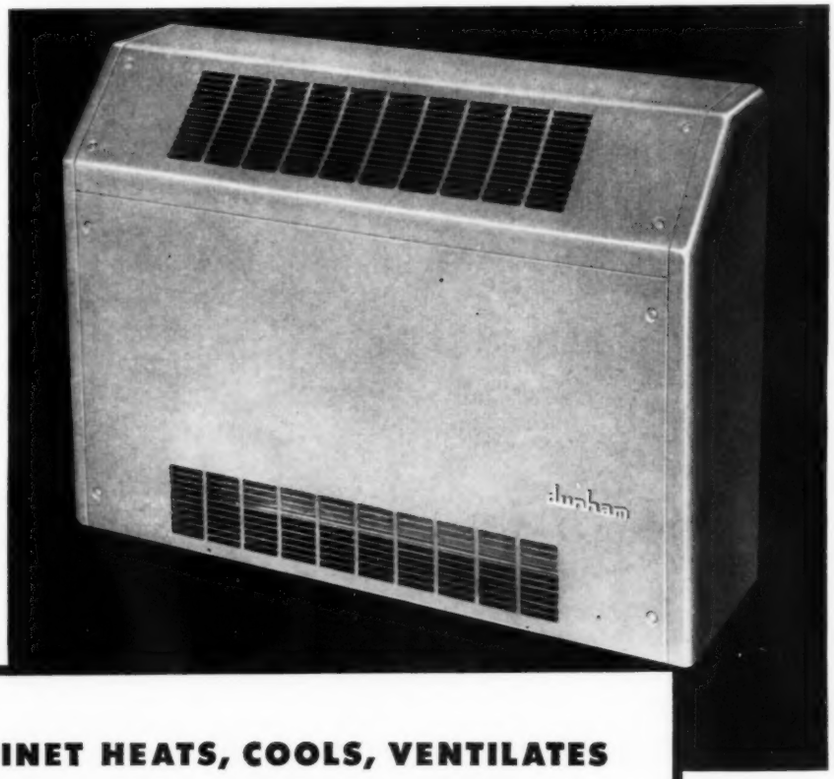
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THE RECORD REPORTS

(*Continued from page 330*)

OFFICE NOTES

Offices Opened

• Walter Henning, A.I.A., has announced the opening of his executive office at 831 Via de la Paz, Pacific Palisades, Cal.

• John T. Hills, M.E., Richard A. Hesslein, C.E., and Dana G. Dodge, C.E., have opened an office for the practice of engineering and surveying. The firm will be known as Hills, Hesslein and Dodge and the address is 592 Pine St., Manchester, N. H.

• K. Izumi, M.R.A.I.C., A.R.I.B.A., announces the opening of his office for the practice of architecture and planning at 1818 Scarth St., Regina, Sask.

• Rufus D. Lewis Jr., Architect, has announced the opening of his office at 349-B West Evans St., Florence, S. C.

• John Stetson Associates, Architects, have opened a Fort Lauderdale office. The address is: Alfred V. Dupont, Associate, 719 East Los Olas Boulevard, Fort Lauderdale, Fla.

New Firms, Firm Changes

• John K. Dukehart, A.I.A., and associates Paul H. Wallwork and Elizabeth P. Kinne have formed a partnership under the firm name of Dukehart, Wallwork & Kinne. Offices are at 2311 N.W. Irving St., Portland 10, Ore.

• A new firm, Stapert-Pratt-Bulthuis & Spran, Incorporated, Architects and Engineers, has opened offices at 474 Academy St., Kalamazoo, Mich. Firm members are Raymond Stapert, A.I.A., Herman J. Pratt, A.I.A., Alfred C. Bulthuis, A.I.A., and George W. Spran, A.I.A.

New Addresses

The following new addresses have been announced:

F. Wallace Dixon, A.I.A., 1832 M Street, N.W., Washington 6, D. C.

John F. Galbraith, Architect, 2805 East Foothill Blvd., Pasadena 8, Cal.

John Graham & Company, Architects & Engineers, 1501 Dexter Horton Bldg., Seattle 4, Wash.

Kokkins and Lyras, Architects, 660 Madison Ave., New York 21, N. Y.

Carroll Martell, Architect, 720 Realty Bldg., W. 242 Riverside, Spokane 1, Wash.

Clarence A. Smith II, C. A. Smith & Associates, Architects, Grand Theater Bldg., Atlanta, Ga.

Roy L. Thomas, Architect, 2812 Hemphill Park, Austin, Tex.

J. Morris Woolfson, Architect, 104 Lewis St., Ottawa 4, Ont.

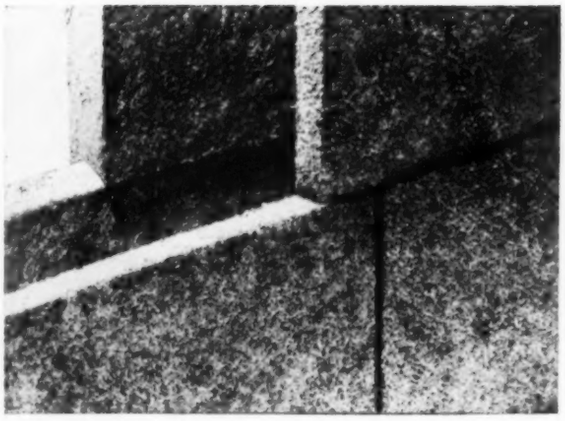
WITH THE A.I.A.

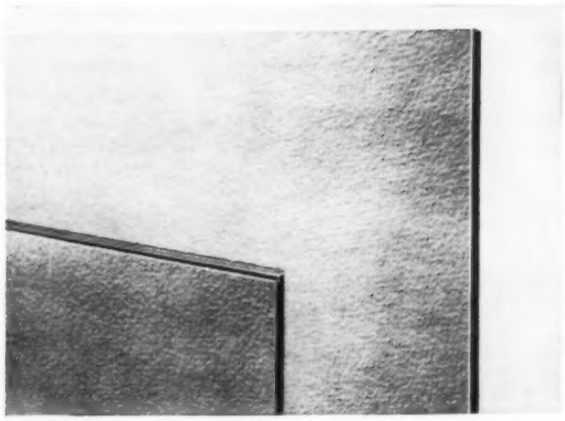
• Holman J. Barnes has been elected president of the Oregon Chapter of the American Institute of Architects. Other new officers: Albert Hilgers, vice president; Donald W. Edmundson, secretary; DeWitt C. Robinson, treasurer; and H. Abbott Lawrence, Herman Brookman and Clarence H. Wick, directors. All are from Portland.

(*Continued on page 334*)



WHAT DO YOU LOOK FOR IN SHEATHING?



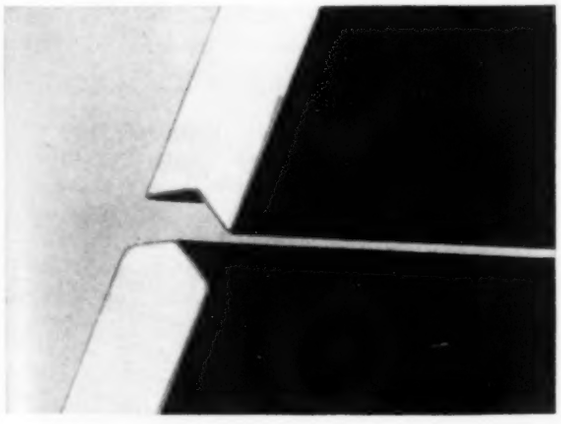


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THE RECORD REPORTS

(*Continued from page 332*)

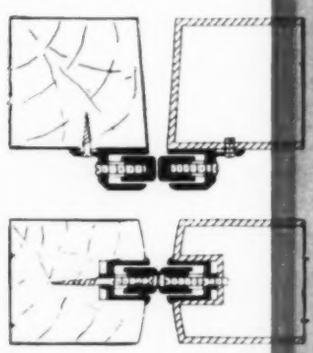
• New Hampshire Chapter of the A.I.A. elected Richard Koehler of Manchester as president at its fifth annual meeting at Andover. Also elected: Leo P. Provost (Manchester), vice president; Edward B. Miles (Exeter), secretary; Robert Snodgrass (Nashua), treasurer; and Archer Hudson (Hanover), director.

• The public relations committee of the Georgia Chapter, headed by Miller D. Barnes, has sent self-addressed postcards to all chapter members for their use in providing the committee with news of their activities for transmission to the *Atlanta Journal-Constitution*. The cards were accompanied by a mimeographed letter advising members the newspaper had promised cooperation and listing five specific categories of news the individual firm might supply — formation of new firm; new members, associates, etc.; letting of construction contracts; publicity in national magazines and speeches before civic groups; A.I.A. committee work or special events.

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AT THE COLLEGES

Ohio Names Engineering Dean

Gordon B. Carson, 41, a former member of the engineering faculty at Case Institute of Technology, is the new dean of the College of Engineering at Ohio State University. Mr. Carson, who received his B.S. in Mechanical Engineering from Case in 1931 and his M.S. from Yale in 1932, taught for 12 years at Case, where he headed the industrial division of mechanical engineering and developed the curriculum for the graduate program for the M.S. in Industrial Engineering. Since 1944 he had been with the Selby Shoe Company, most recently as secretary and manager of engineering.

Student Awards Listed

• The College of Architecture and Design of the University of Michigan has announced the 1953 winners of two scholarships. Edward Warren Hammarskjold of Ann Arbor, Mich., has received the *George G. Booth Traveling Fellowship;* he plans to travel in England and Europe. The *Harley, Ellington and Day Scholarship* of $1000 has been awarded to Denis Charles Schmiedeke, also of Ann Arbor.

• The 1953 *Magnus T. Hopper Fellowship* in hospital planning, a $2000 award given annually by the Yale University Department of Architecture, has been awarded to Avery Coonley Faulkner of Washington, D. C., a candidate for the Bachelor of Architecture degree in 1954. The fellowship was established in 1949 under the sponsorship of Charles F. Neergaard, Yale '97, senior member of the New York firm of Neergaard, Agnew and Craig, hospital consultants.

• Seven of the 40 members of the 1953 graduating class of Columbia University's School of Architecture will study in Europe during the coming year as first recipients of the William Kinne Fellows Memorial Traveling Fellowships. Fellows are: Theodoor H. A. Boosten, Brooklyn; Robert A. Burley, Kenmore; Donald L. Dimick, Helper, Utah; Joseph A. Fernandez Jr., Sunny-

(*Continued on page 336*)

G-E announces a really NEW Water Cooler!



YOU'VE NEVER SEEN a water cooler like this before—styled to fit the smartest showroom, yet rugged enough to take hard use in a plant. It's the all-new Diamond Anniversary G-E Water Cooler, sparkling with far-ahead features.

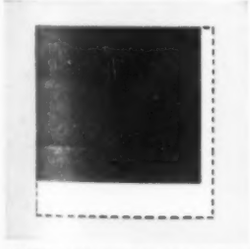
NEW COMPACTNESS, requires 30% less floor space. Tucks away almost anywhere.

NEW SERVICING EASE, all adjustments made through snap-off front.

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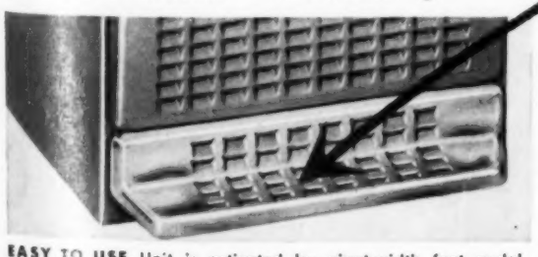
GET THE FULL STORY on new G-E Pressure and Bottle Coolers. Send in the coupon...then take advantage of the G-E 5-Year Protection Plan!



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CLEAN AND SANITARY. Electropolished anti-splash top and handsome gray hammered finish resist soiling.



EASY TO USE. Unit is activated by giant-width foot pedal, directly linked to valve. No groping, even in the dark.

GENERAL ELECTRIC



General Electric Company, Air Conditioning Division, Section AR-16, Bloomfield, New Jersey

Rush full particulars on the Diamond Anniversary G-E Water Cooler.

NAME ..... COMPANY .....

ADDRESS .....

CITY ..... COUNTY ..... STATE .....

(*Continued from page 334*)

side, N. Y.; Elaine Fisher Frank, New Rochelle, N. Y.; John Marlais, Hasbrouck Heights, N. J.; and James P. Oubre, New Orleans. The Fellowships were established at Columbia earlier this year under the will of the late Mrs. William Kinne Fellows, whose husband was an 1894 architecture graduate of Columbia and later was awarded a traveling fellowship by Columbia.

• Award of 13 scholarships under the Moholy-Nagy memorial scholarship fund at the Institute of Design of Illinois Institute of Technology has been announced. The scholarships, established in honor of the late Laszlo Moholy-Nagy, founder of the Institute, are given on the basis of scholastic record, character and financial need to Institute students. The 13 recipients, all but three from Chicago and all but two undergraduates: Norman Borchew and Martin Moskoff (graduate work), Ivan Chermayeff of Wellsfleet, Mass., Norman Laliberte, Thomas Lindem, Mary Lou Farnberg, James Golden, Robert Knille, Burton Kramer, John Zerning, Charles Warstler, Deborah Sussman of Brooklyn and Marcia Ann Harrison of Hammond, Ind.

Sessions on Radiant Heating

The Department of Architecture at Pratt Institute will sponsor a series of meetings on radiant heating during October and November of this year. Authorities in the fields of design, research, equipment and materials have consented to participate in an overall analysis of this type of heating. Sessions are scheduled from 7:30–9:30 p.m. October 13, 20 and 27 and November 3, 10 and 17. Session titles are: Radiant Heating in Contemporary Architecture; Design Standards; Engineering Design and Installation; Controls; The Builder's and Owner's Viewpoint; Research and Development.

"*Technical Color Harmony*"

The Los Angeles Trade Technical Junior College at Los Angeles is offering a night course known as "Technical Color Harmony" intended for architects, interior designers and others who deal with color problems. Instruction is on the Ostwald system of "measured color" as accepted by the National Bureau of Standards, the Optical Society of America and the Inter-Society Color Council. The next class (one semester only) opens September 18. The college is at 1646 South Olive Street, Los Angeles.

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Gate City Wood Awning Windows provide EXTRA protection against heat loss and condensation because wood is a non-conductor; far superior to any other sash material as a natural insulator.

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ADDENDA

• The map of Lima, Peru, shown on page 125 of the August issue of the RECORD, was used through the courtesy of *L'Architecture d'Aujourd'hui*.

• Tommy Tomson of Beverly Hills was the landscape architect for Statler Center, Los Angeles, which was published in the May issue of the RECORD, pages 127–136 (Holabird & Root & Burgee, Architects and Engineers; William B. Tabler, Associate).

(*More news on page 338*)

ARCHITECTS: SMITH & VOORHEES, DES MOINES, IOWA



Contractor: Hurley Construction Co., St. Paul, Minn.

MODERN SCHOOL DESIGN SAVES $500 PER ROOM

Smith and Voorhees specified glued laminated wood structural members for the Webster Grade School at Pella, Iowa and the West Side Grade School at Eagle Grove, Iowa. Cost comparison showed a savings of $500 per schoolroom over other types of construction materials.

Contractors find they can give lower bids when Rilco glued laminated wood is specified. Gene Hurley, contractor of both jobs says, "Rilco really cut erection costs. The beams arrived on the job ready for erection. No specialized crews were necessary; the carpenters did all the erection easily with the connectors furnished by Rilco. There was no furring, we just nailed the Rilco decking to the top of the beams and purlins."





The natural beauty of Rilco glued laminated wood gives an attractive interior; the ease of erection and elimination of interior finishing cuts construction costs—yet Rilco structural members offer the architect freedom of design with simple yet effective construction in a fire-resistant material.

For the modern school design that calls for economical construction and beauty, the architect who specifies Rilco achieves an attractive and structurally sound building at lowest cost. Rilco's service engineers will be pleased to consult with you about your requirements. Write for information or see our catalog (2B/Ri) in Sweets.

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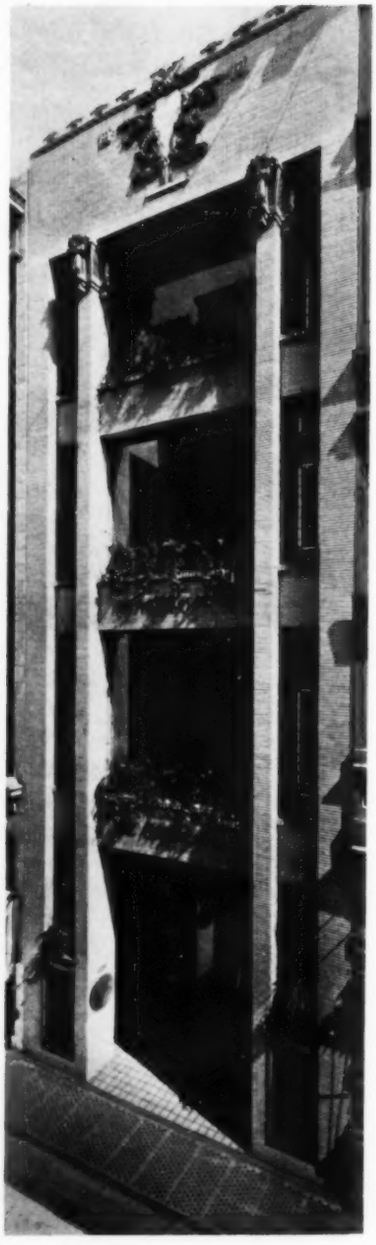
(*Continued from page 336*)

PIONEER MIDWEST FIRM HONORED WITH EXHIBIT

Another step in the gradual filling-in of details concerning that development in American architecture known as the "Chicago School" and its well-known corollary, the "Sullivan-Wright tradition," was undertaken by Minneapolis' Walker Art Center, which recently held an exhibit of the work of Purcell & Elmslie, an early 20th century Minneapolis firm whose buildings are part of this development. Some of the structures executed by the firm and included in the exhibit are shown on this and following pages.

William Grey Purcell, who now lives in Pasadena, California, and George Grant Elmslie, who died last year (see ARCHITECTURAL RECORD, July 1952, p. 28), were partners from 1909 to 1921, part of this time with George Fieck. Before the partnership, Elmslie had worked as a close associate of Louis Sullivan for a number of years. Purcell had also worked with Sullivan for a brief time. Their work bears the clear imprint of Sullivan's influence, but — as evidenced by the buildings shown here — it was not copy-book design. Elmslie, as a matter of fact, has been credited with a number of significant contributions to work done by Sullivan's office during his last years there.

(*Continued on page 340*)



Above: The Edison Shop building in Chicago, a 1912 work by the firm which employed glass extensively

NEW THE ALL-PURPOSE TREATMENT

for protection of all types of exterior masonry above grade

MINWAX TRANSPARENT (SILICONE BASE)

Alexander Hamilton High School, Elmsford, N. Y.



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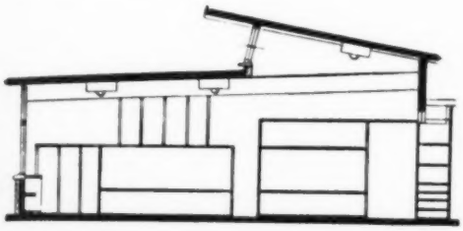
Skylike-------solves a school lighting problem



THE PROBLEM . . .

To provide correct lighting throughout a modern, single story school building where clerestory construction to provide natural light precludes the use of conventional artificial lighting metnods.

THE SOLUTION . . .



In each classroom (typical cross-section shown above) fifteen 300 W. Silvered-Bowl Lamp, surface mounted SKYLIKE fixtures were installed. They were centered between beams which are exposed in this type of construction. Light for critical seeing conditions was provided in all parts of the room during the day...and for night use.



Typical classroom at the Whittier School at Bozeman, Montana

Mr. Oswald Berg, Jr. architect for the Whittier School at Bozeman, Montana, comments on the installation as follows:

"The Silvray Skylike fixtures are in keeping with the atmosphere and structural system of the school. This fixture provides an even, high level controlled distribution of light. It is also of very low brightness because of the shielding provided by the louver. Because of its high efficiency, low wattage lamps were used with resultant economies in electrical circuits and reduced heat from the lighting system."

Skylike...

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DEPARTMENT STORES
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THE RECORD REPORTS

(*Continued from page 338*)

Near right: cover for the catalog of the Minneapolis exhibit was designed by William Grey Purcell





William Grey Purcell ▲

▼ The late George Grant Elmslie



Teaching is

CHILD'S PLAY



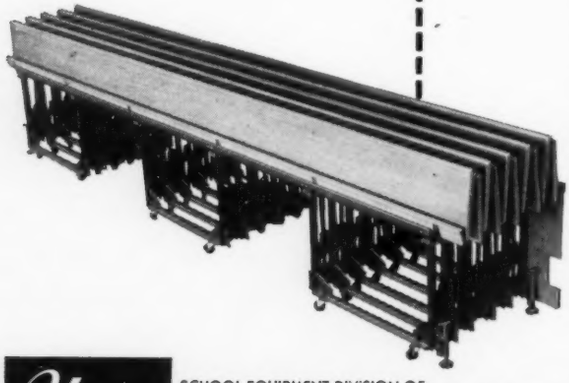
Photographed in Dearborn Public Schools, Dearborn, Mich.

...with **HORN** folding stages!

Education "comes to life" for children when they use a stage for skits, speeches, assemblies. Portable Horn Folding Stages increase classroom usefulness, make learning fun, teaching easier.



Easy to open—portable, easy to move, easy to open for use in any room. Sturdy steel understructure. Locking action keeps stage stable, adjusts to uneven floors.



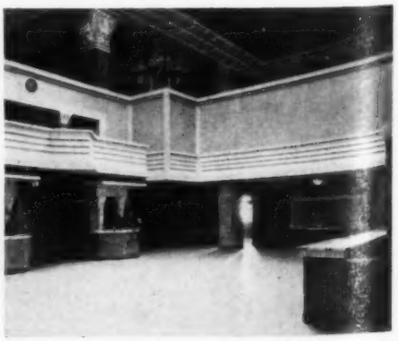
Easy to store — folds compactly. Stage that extends to 11 feet 4 inches, folds, stores in 25¼ inches. In standard widths. 15 and 24 inch heights, depths up to 35 feet. For full information about the *only* portable folding stage, write:

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THE BRUNSWICK-BALKE-COLLENDER COMPANY
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Above and below: Woodbury County Courthouse, Sioux City, Iowa, 1917, only large government building by the firm



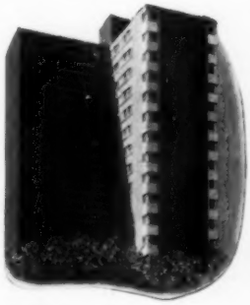
(*Continued on page 342*)

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GENERAL PETROLEUM BUILDING,
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Architects—Wurdeman & Becket



COURT HOUSE, Tampa, Florida
Zonolite Plaster
Assoc. Architects & Engineers—
Reynolds, Smith & Hills, Jacksonville



LEVER HOUSE, New York City
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Architects—Skidmore, Owings & Merrill



GROSVENOR HOUSE, Seattle, Washington
Zonolite Plaster Partitions
Architects—Earl W. Morrison & Assoc.

Actually, Zonolite is *three* times lighter than ordinary plaster. Think how that speeds up the job! Cuts labor costs! And it cuts building costs, too! Recently, a Miami hotel job cut 2,500,000 pounds of deadweight by switching to Zonolite Plaster.

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THE RECORD REPORTS

(*Continued from page 342*)

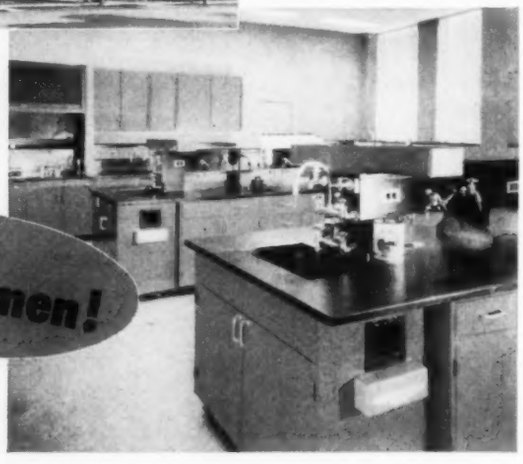


One of the firm's few executed industrial projects was for the International Leather and Belting Corporation. Two identical units were built in New Haven and Chicago in 1917. These were to have been the first sections of large factories. Extensive employment of glass in side walls anticipated later practice



New Research Building of Wyandotte Chemicals Corporation, Wyandotte, Michigan.

One of Wyandotte's Laboratories showing Kewaunee Equipment with KemROCK Tops.



KemROCK is one of our TOP salesmen!

● Back of every piece of Kewaunee Equipment is nearly 50 years of constant advance in design, construction and working convenience that has kept pace with the progress of Industries, Hospitals and Educational Institutions.

● And when it comes to Tables, Sinks and other Laboratory pieces requiring "Tops" defiantly resistant to acids, alkalies, solvents, heat and abrasion —KemROCK steps into the picture as one of Kewaunee's "Top" salesmen. For example, back in 1941 Wyandotte Chemicals Corporation first ordered Kewaunee Equipment with these "Toughest of all Tops." Now after 12 years of experience, Wyandotte again specifies "Kewaunee with KemROCK Tops" for their modern Research Building.

● KemROCK is an exclusive Kewaunee product made from natural stone (free from veins and seams)—impregnated and coated with a synthetic resin —then baked. It is jet-black—takes a high polish and adds much beauty as well as amazing extra service to Laboratory pieces.

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sent on request. Remember, too, that Kewaunee field engineers are available to you without cost or obligation.

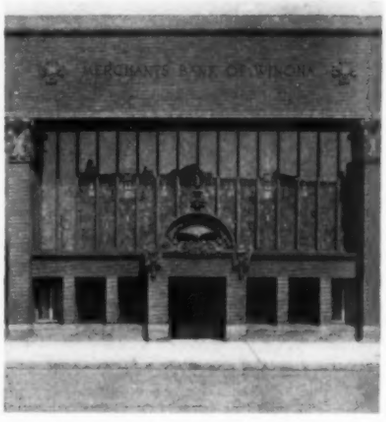
Manufacturers of Wood and Metal Laboratory Equipment

Representatives in Principal Cities

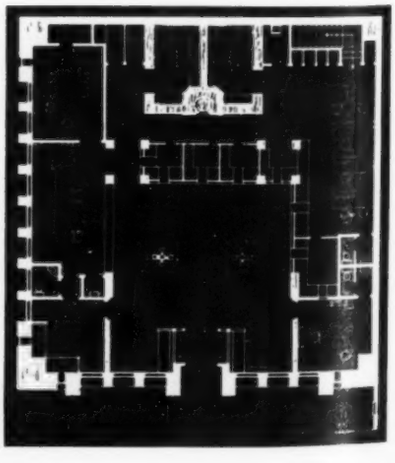
Kewaunee Mfg. Co.

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The Merchants' Bank of Winona, Minn., 1911, is one of many small-town banks executed by the firm. If they seem to bear a striking similarity to Louis Sullivan's small-town banks, it should be remembered that Elmslie was largely responsible for planning and detailing these during his years in Sullivan's office. Below, plan of the bank

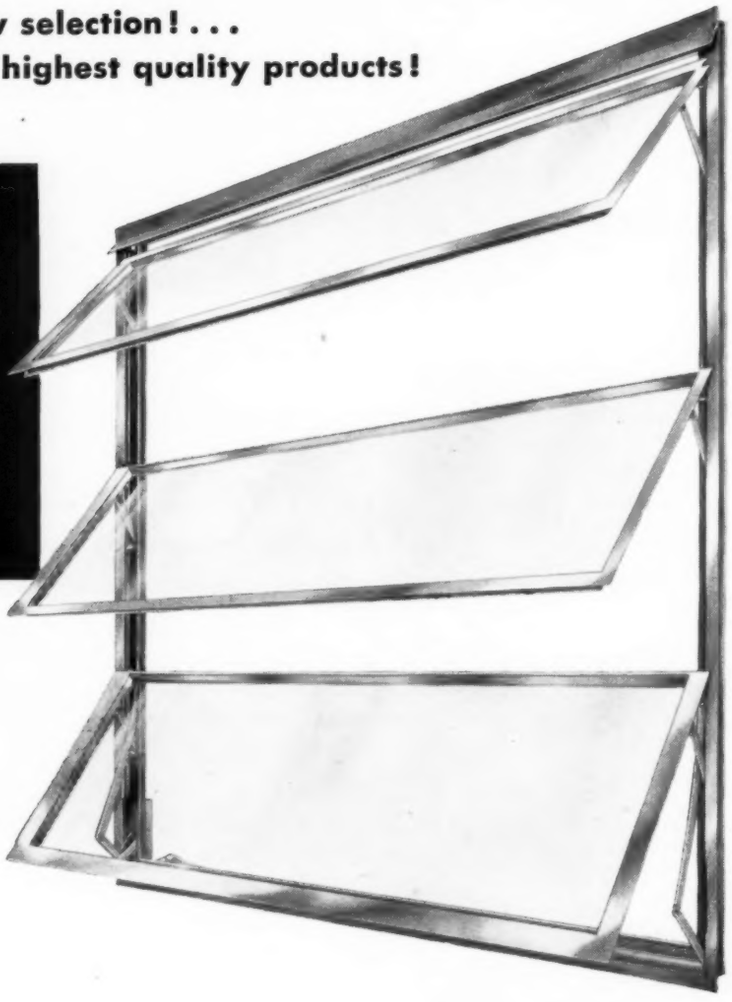


(*More news on page 346*)

THE BIG LINE IS GROWING BIGGER!

to give you greater window selection! . . .
to help you standardize on highest quality products!

HERE'S TRUSCON'S NEWEST!





Sturdy operating mechanism protected against weather, sand, dirt, salt spray. Simultaneous, equalized ventilator opening. Positive closing.

Aluminum Awning Windows

● The window advances are coming from Truscon! Last summer Truscon announced the Ranch Window that set new standards in steel windows for popular one-story homes. This spring Truscon introduced its sensational aluminum casement in modular sizes. Now . . . Truscon offers you what the trade has been waiting for . . . its customary quality design and sturdy construction in a brilliantly new aluminum awning window.

Truscon Aluminum Windows feature modular sizes to match standard masonry dimensions. Approximately 8% more light and ventilation per window opening. Heavy extruded aluminum sections with a minimum frame depth of 1⅞". Weathertight construction with vinyl plastic weatherstripping. Protected operating mechanism. Many more features you'll want to know about. Write Truscon for latest bulletins. Watch the big line for the big news. When Truscon offers a new product you can bank on its satisfactory performance.

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(*Continued from page 344*)

NEW OFFICE OPENED IN CHARLOTTE BY CARRIER

Recently opened in Charlotte, N. C., were the new offices of Carrier Corporation, manufacturers of air conditioning units. The windowless building, which is, of course, completely air conditioned, is located on a 100 by 387 ft tract to the rear of which passes the Columbia Division of the Southern Railway.





Above: the entrance to Carrier's combination office and shop. Below: the office area, in front, is windowless

The building, for which Biberstein, Bowles & Meacham of Charlotte were the architects, contains office space for 18 to 20 people and a pipe fabricating shop, 80 by 35 ft, in the rear. The office area has eight offices, all 12 by 13 ft, a conference room, an entrance hall and storage space.

The structure is of concrete block faced on three sides with brick. At the back of the building the concrete block has been left unfaced in case future expansion should be required. Interior partitions are also of concrete block finished with water paint.

The floors of the building are all of concrete on grade, covered in the office area with asphalt tile. The door frames are metal, and all doors are undercut for return air purposes in the event that the doors may be closed off at some later date.

(*More news on page 348*)



Specify Furniture by

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—always in good Taste

HUNTINGTON manufactures a complete line of seating units, beds, cases and occasional furniture for every use.

HUNTINGTON also manufactures high quality precision made pre-built units for nurses' and students' quarters. If your client is quality minded write us for quotations.

HUNTINGTON furniture is designed by Jorgen Hansen and Jens Thuesen—your clients assurance that Huntington furniture is always in good taste.

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. . . of course, it's electric!

Twin bonus for budget homes

Famous **Westinghouse Laundry Twins** now available **At New Low Prices**

Now you can add the proved "buy appeal" of a Westinghouse Laundromat® and Clothes Dryer to even the lowest priced home . . . because these famous laundry twins are now available at attractive builder prices.

The *new* Laundromat and Clothes Dryer still give you Westinghouse quality. The Laundromat, model LS-7, is completely automatic. Its cycle can be stopped, started, or repeated, by the flexible single-dial control. Its patented Agi-Tumble action washes regular loads and delicate fabrics thoroughly, gently, and safely.

The Clothes Dryer, model DS-7, is full sized, and fully automatic, too! Its time control dial, together with direct air flow drying, offers faster drying for all types of clothes.

There's simply no comparison with any other low-priced laundry equipment. In every way, the Westinghouse Laundromat and Dryer are truly "America's Favorite Laundry Twins".

Complete information upon request.

EXCLUSIVE SLANTING FRONT
on each of the twins permits easy access into basket. Large door makes extremely handy loading and unloading platform.

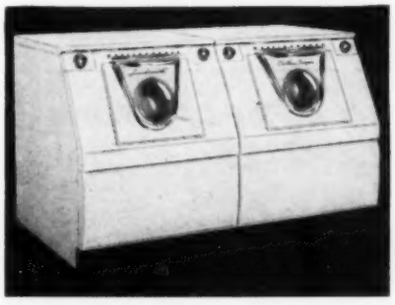


LARGE-SIZE LOADS
Laundromat will wash up to 9 lbs. of clothes, dry weight. Clothes Dryer will dry same load.

WESTINGHOUSE ELECTRIC CORPORATION
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Makers of Refrigerators, Home Freezers, Ranges, Laundromats, Dryers, Dishwashers, Water Heaters, Vent Fans and Food Waste Disposers.

YOU CAN BE SURE... IF IT'S Westinghouse



DE LUXE MODELS FOR EXTRA APPEAL
Model LB-6 Laundromat has extra convenience features, such as Weigh-to-Save Door and Water Saver. D-6 Clothes Dryer has 3-Way Dry Dial and Singing Signal.

(*Continued from page 346*)

$64 MILLION PHS CLINIC OPENED IN BETHESDA, MD.

Open for business on July 6, the United States Public Health Service's new Clinical Center in Bethesda, Md., is devoted to the study of such chronic and organic diseases as heart disease, cancer and arthritis. The 14-story building, which was designed and built by the Public Buildings Service of the General Services Administration, and cost $64 million to build, has facilities for 1100 laboratories and 500 patients.



Above: a north view of the Public Health Service's Clinical Center in Bethesda. The roadway leads to the entrance

The laboratories, of which there are about 100 to a floor, are placed on the north side of the building; the patients' rooms have a southern exposure. The center of the building contains nurses' stations, dietary kitchens and treatment rooms. General services, such as admissions, auditoriums and operating rooms, are located on the top and ground floors.

In addition there are various special wings for animal research, basic science studies and autopsies. Not yet open is the 8-story wing, partly underground, for radiation treatment and research.

The center was designed for research rather than for treatment, and the patients, all volunteers, will be admitted for their interest for the researchers.

Below: the south face of the building, from which the patients' rooms look out over the Maryland countryside



(*More news on page 350*)



1. Your RCA Sound Distributor

For expert, "no obligation," planning assistance, you'll find your RCA Sound Distributor is the man to know.

He can offer you advice on the latest in equipment, the newest in sound techniques. His experience covers a wide range of applications including schools, plants, hospitals, hotels, institutions, and stores.

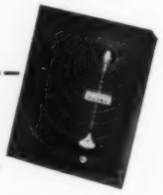
Call on him for the answer to any question involving sound.

2. New RCA Sound Products Catalog

Here, in easy-to-find form is the full line of RCA Sound Products.

In 17 pages, you'll find helpful data on RCA sound equipment from microphones to large sound system centers. Get this booklet for your files. It's a handy reference for any sound job you may tackle.

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RCA **RADIO CORPORATION of AMERICA**
SOUND PRODUCTS CAMDEN, N.J.

If You Could X-RAY USF "Wooster" Hollow Steel DOORS and frames





FAST INSTALLING FRAMES

Jig welded, positively square frames erect rapidly in wood, masonry or plaster partitions. All attachments furnished.

All hinge and strike reinforcements are mortised, drilled and tapped on both doors and frames.

RIGID DOORS

Box type, internally jig welded door construction assures rigidity, squareness and freedom from warpage.

THEY MATCH FROM CORRIDOR TO CLOSET

USF's "Wooster" hollow metal doors and frames are the only ones offering matching flush panel design for every purpose from corridor entrances to swinging or sliding closet doors.

They are economical, too, because the one piece welded frames install rapidly with least labor, hardware mounts accurately, and doors are a sure fit every time.

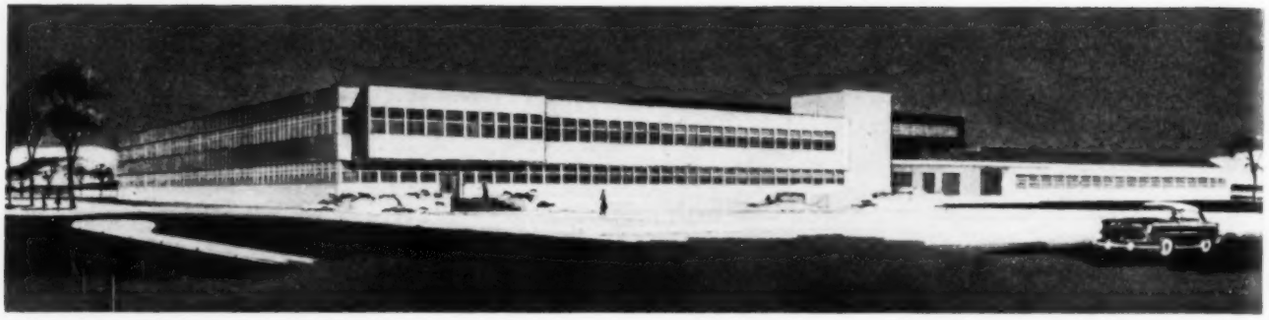
For hollow steel doors and frames that are the standard for most American investment builders, specify USF "Wooster" Doors and Frames. For further data see us in Sweet's.

USF®

United Steel Fabricators, INC.

WOOSTER, OHIO

 (*Continued from page 348*)







LATEST COURT MARKING DATA

Here's help—one folder containing the latest official dimensions and specifications for gymnasium floors. It is an accurate guide for your designers and specification writers. A big help in presenting accurate plans to the school board. Ask for one or several of these illustrated folders for study and reference. Write today.

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CITY STATE

OWENS-ILLINOIS BUILDS GLASS RESEARCH CENTER

A new research center, scheduled for completion in the fall of 1954, is being built by the Owens-Illinois Glass Company in Toledo, Ohio. The center, designed by Holabird & Root & Burgee, will contain offices, drafting rooms and laboratories and will incorporate a pilot plant already located on the site to house manufacturing equipment for testing materials under actual conditions of production.

The research program of the company has as its aim the study of new uses for glass and new methods of manufacturing, as well as the improvement of present methods and materials. The new technical center will put all the operations of this program, from original concept to finished product, in one location.

Heavy Equipment Furnished

The pilot plant will feature several furnaces, each with a capacity of 25 tons, for research into hot glass operations, and equipment will be installed for the duplication of the various electrical currents used in the company's plants in other parts of the country.

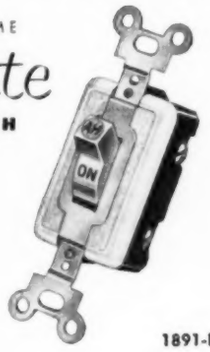
Demountable partitions will be installed in both the office building and the pilot plant; as the occasion demands, offices can be changed to laboratories and back again. A recreation room and cafeteria for the employes at the center will be located in the basement.

The exterior of the building is to be of light-colored brick and aluminum panels, with asbestos-covered metal panels on the single outside wall of the pilot plant. The center, which will cover an area of 270 by 480 ft, will be mainly of two stories, while the pilot plant in the rear will be of one story.

(*More news on page 352*)

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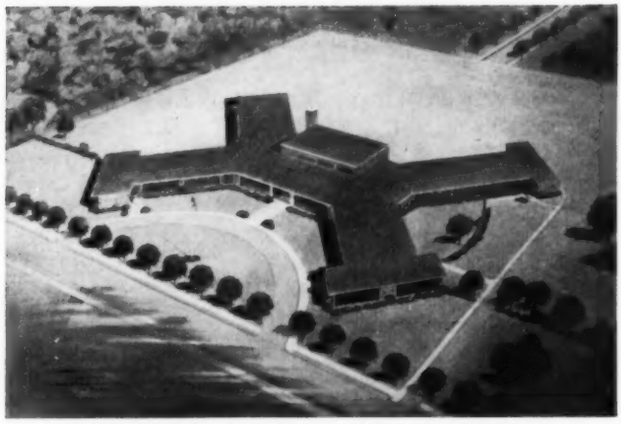
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THE RECORD REPORTS

(*Continued from page 350*)

CONVEYOR BELT TESTED ON PASSENGER TRAFFIC

Goodyear Tire & Rubber Company and Stephens-Adamson Manufacturing Company report that tests have shown that their conveyor belt designed for passenger transportation (ARCHITECTURAL RECORD, Sept. 1952, p. 14) is a workable system. Men, women and children of all age groups were tested, as well as persons who were physically handicapped.

The belt used for the test was nine ft wide and sixty ft long, and moved at a speed of one and a half miles an hour. Designed to handle as many as 16,000 people an hour without congestion, the belt has been suggested as a substitute for the old Times Square-Grand Central shuttle in New York City and for similar use in other cities.



1



2



3



4

The passenger belt was first suggested as a solution to the congestion problem on New York's Times Square-Grand Central shuttle. Photographs taken at the tests in Aurora, Ill., show: (1) passengers moving onto the belt, which is going at a speed of one and a half miles per hour; (2) passengers walking with no apparent difficulty along the nine-ft-wide belt; (3) the passengers entering the cars, which hold 14 persons and move at the same speed as the belt; and (4) passengers leaving the cars at the end of the line.

(*More news on page 354*)



is your venting knowledge up to date?

For too long the belief has persisted that any type of passage-way to the outside is adequate for venting gas appliances. Such concepts have resulted in erroneous, and sometimes dangerous, venting practices such as those illustrated above. They have resulted in homeowner complaints due to overheated walls, musty, stale-smelling air and damage to walls and furnishings—largely caused by uninsulated vents improperly installed.

Now, the latest and most comprehensive venting research ever undertaken has proved the importance of properly designed and installed venting systems. Factors such as the location and size of vents and the materials from which they are made are now known to be of vital importance to the successful operation of a venting system.

For correct venting *specify* METALBESTOS.

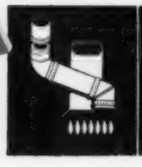
- **Double-wall design** with inner "hot stack" for strong draft and no condensation; air-insulated outer pipe for greater protection.
- **All aluminum construction** resists corrosion, will not break or crack.
- **Listed and approved** by Underwriters' Laboratories, Inc. as a Type B gas vent.

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Based on the latest venting research, this booklet explains the important principles and rules to follow for the proper venting of gas appliances. It includes information on vent capacities and the location of vents together with illustrations of typical venting installations. Write today to Dept. L.





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HIGH STRENGTH BOLTS vs. RIVETS

High strength bolts are replacing rivets in modern construction. Field connections can be made more economically with high strength bolts. While the bolts cost more than rivets initially, the assembled cost is much lower.

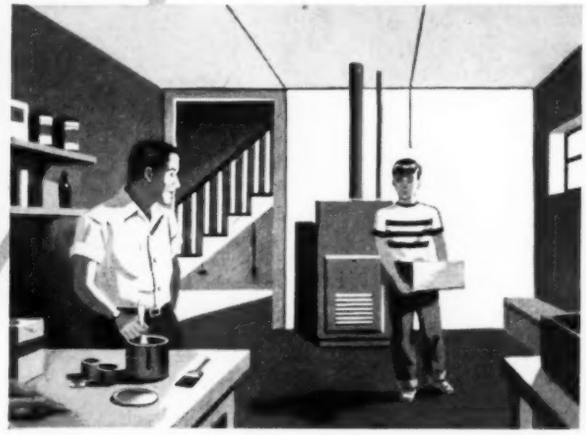
Write RB&W for further information. Plants at: Port Chester, N. Y., Coraopolis, Pa., Rock Falls, Ill., Los Angeles, Calif. Sales offices at: Philadelphia, Pittsburgh, Detroit, Chicago, Dallas, San Francisco. Sales agents: Portland, Seattle.

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THE RECORD REPORTS

(*Continued from page 352*)

UNION CARBIDE OCCUPIES NEW OFFICES NEAR L.A.

Six divisions of Union Carbide and Carbon Corporation are now housed in this one-story reinforced concrete and stone building on a three-and-a-half-acre site in Vernon, a suburb of Los Angeles. The building has been leased for 21 years from John M. Stahl. Architects were Denver Markwith Jr. and Jack H. MacDonald, of McClellan, MacDonald and Markwith, Los Angeles.







Top: letters above entrance are stainless steel. Above: lobby was designed for cheerful welcome, frank view of working offices. Below: all offices border the patio, have view of the rock gardens

The air conditioned office area is daylighted from a slate-surfaced patio in the center of the building. Office walls are colorful and floors are covered with asphalt tile. A lunchroom, equipped with a range and a refrigerating unit, and a paved parking area, are available for the use of more than 80 employes.

The warehouse is served by a railroad spur from the Los Angeles Junction railway. One hundred ft of platform are available for truck shipments.

(*More news on page 368*)



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V. I. Whitney residence, Montesano, Wash., modernized with Webster Baseboard Heating. Heating Contractor: Zimmer Heating Sales and Engineering.

"We are delighted with this new installation. Now we have the beauty of floor-length drapes and wall-to-wall carpeting. Our furniture can be placed wherever we like. The comfort and satisfaction we get from this new method of heating, merely replacing the radiators, with no other change in our heating, has been remarkable."

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THE RECORD REPORTS

(*Continued from page 24*)

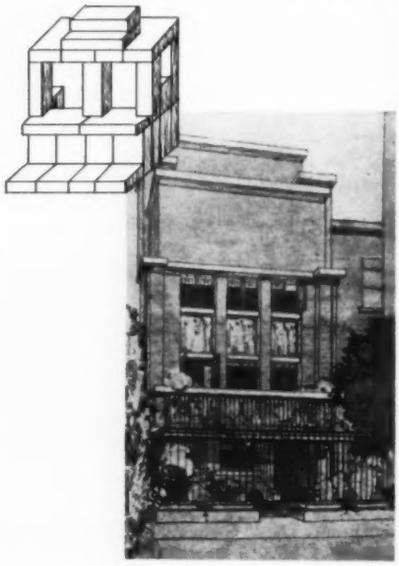
Periodical Report

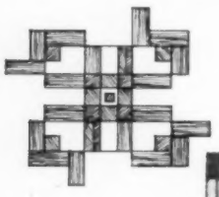
F.LL.W. in Knee Pants

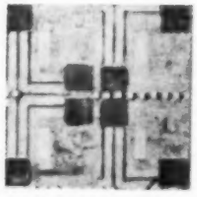
The search for influences on the work of Frank Lloyd Wright has now been pushed to the point where the next step may have to be taken by specialists in pre-natal influence. As it is, he has now

(*Continued on page 360*)

Below: Froebel patterns, Wright designs

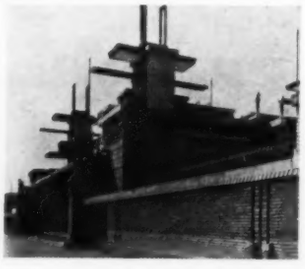












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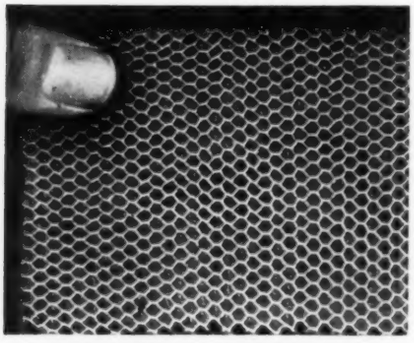
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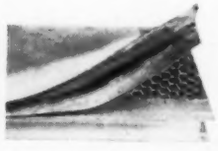
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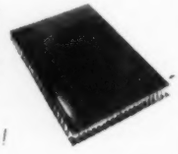
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Porcelain Enamel Sandwich illustrates rigidity and smoothness of sandwich structures fabricated with Hexcel Honeycomb.



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THE RECORD REPORTS

(*Continued from page 356*)

Periodical Report

been traced back to within seven years of this point by Grant Munson, who, writing in the June issue of *Architectural Review*, has traced the formative influence of Froebel toys Wright played with from the age of seven. (Froebel was a German educator who evolved the Kindergarten concept and encouraged the direction of play into creative channels through the use of simply-shaped and brightly-colored construction toys.)

The influence of the toys has been known before this, since Wright speaks of them himself in his autobiography, but Mr. Munson actually traces back to see what they were like and how they resemble Wright's own forms. He has unearthed some remarkable similarities and parallels between typical Froebel patterns and F.L.L.W. architectural forms. A sampling of the results are shown on page 356, with all the Froebel illustrations and all but one of the Wright buildings being Mr. Munson's selection. The other building is a RECORD selection.

In addition to casting some new and rather convincing light on an unfamiliar area of possible influence, the article probably furnishes Wright with another "first," since not many architects have in their own lifetime experienced any such "invasion" of the privacy of their childhoods.

Mumford on Follies

The Architects' Journal for July 9 reports on a talk given to a British students' association by Lewis Mumford. The subject was "Follies of Modern Architecture" and the general thesis is that the modern movement, having been led up a blind alley by the same great men who formed and directed it in the 1920's, has almost come to a dead end, as evidenced by a series of "follies," works created by these men themselves or their imitators. Among the "follies" cited are the United Nations Secretariat Building ("a folly in that its basis is a complete disregard of the functional working of the United Nations"), and Mies van der Rohe's Lakeside apartments in Chicago (". . . pieces of sculpture on an expensive scale which have no relation to the problems of domestic habitation"). A succinct bit of Mum-

(*Continued on page 364*)



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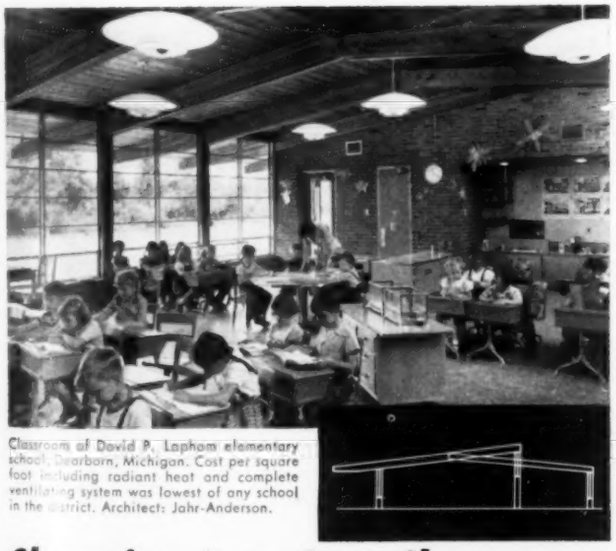
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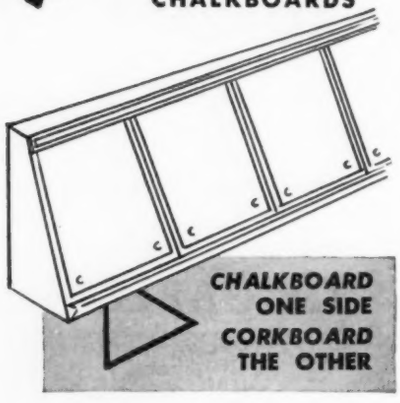
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THE RECORD REPORTS

(*Continued from page 360*)

Periodical Report

fordian prose and thinking is his summary:

"We are living in an age which is achieving greater psychological understanding than ever before, when the doctrines of a profound humanism and organism and a profound conception of the human personality must find a way of being embodied through the architects of our time in forms which will have all the necessary mechanical requisites, but which will do justice to the human personality — and not to one type of personality; not to the intellectual such as Le Corbusier, who everywhere has designed great buildings for one man alone — Le Corbusier. There is an enormous variety in human nature. There is the extrovert who likes an exposed life, the introvert who likes to withdraw, and the balanced man who wants something of both. There is a difference between the intellectual personality with his endeavor to think his way through the world, and the more practical types who have other architectural requirements. Their needs must be formulated in a different version if we are to have a satisfactory architectural solution. . . . The task of the new age is to confront architecture with a sense of what it means for the development of the human personality. . . ."

N.I.D.C. AWARDS OFFERED FOR GOOD PRODUCT DESIGN

FOR THE SECOND CONSECUTIVE YEAR, the National Industrial Design Committee of the National Gallery of Canada will offer in 1954 Design Awards intended to give "recognition and publicity throughout Canada and internationally to good design in Canadian products." Entry blanks may be obtained immediately from the committee and entries are due Jan. 31, 1954.

1954 awards will be given for products for personal, household or office use by a jury which includes John Bland, director of the School of Architecture of McGill University. The jury will be expected to judge on the basis of five qualities: form — pleasing appearance, good taste; function — suitability for purpose; originality — basic improvement on traditional design; good value — simplicity, usefulness, price; consumer acceptability — suitability for Canadian market.

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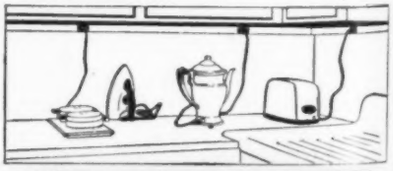
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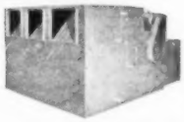
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THE RECORD REPORTS

(*Continued from page 354*)

SLUM CLEARANCE BOOKLET DISTRIBUTED BY N.A.H.B.

The National Association of Home Builders is distributing to civic groups and political leaders around the country a new booklet on slum rehabilitation, "A New Face for America." The brochure was prepared by G. Yates Cook, director of N.A.H.B.'s Department of Housing Rehabilitation and former head of the Baltimore Plan.

The first chapter of the 26-page booklet, "Decline of American Cities," is illustrated with photographs depicting the less savory physical facts of slum areas and charts showing their disadvantages in terms of crime, disease, cost of city services and small tax returns.

In the second chapter the booklet attempts to trace the causes of community blight and to set forth a general pattern of correction in three basic steps: (1) the creation of a simplified housing code laying down minimum standards of decent housing; (2) the administration of the code through one agency, which will prevent duplication of effort on the parts of the many city investigative forces; and (3) an active public relations program to keep the public informed.

The final chapter, entitled "Pattern for Action," concerns itself with the specific problem of organizing a citizens' committee. N.A.H.B. suggests that the mayor appoint a study committee of persons drawn from such groups as the home builders' association, the real estate board, the Negro community, mortgage bankers, social workers, women's clubs and religious organizations. This committee should work with representatives of the city agencies in three sub-committees: program scope and research, legislation and administration.

The program scope and research committee, it is suggested, would look into the current condition of housing in the city, determine where and how much work is needed. The legislation committee would draw up a tight and enforceable housing code while the administration committee would work on the problem of creating a consolidated enforcement agency.

The brochure may be obtained free from N.A.H.B., 1028 Connecticut Avenue, N.W., Washington 6, D. C.

(*More news on page 372*)



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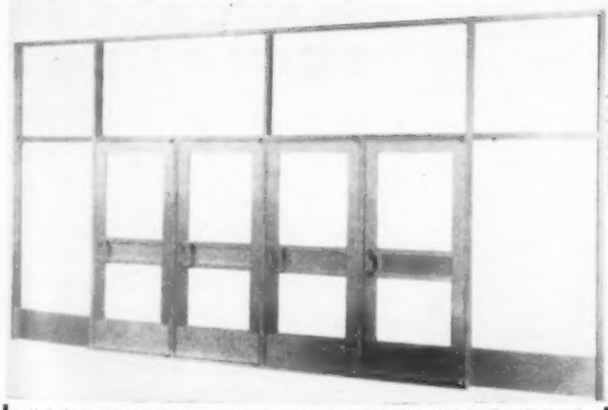
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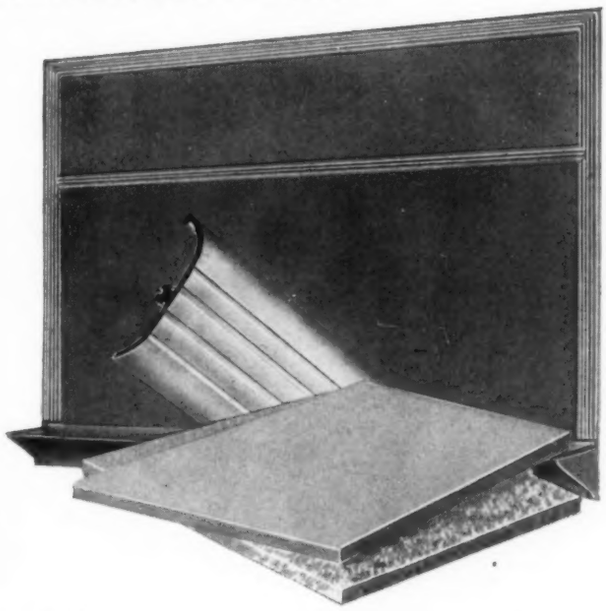
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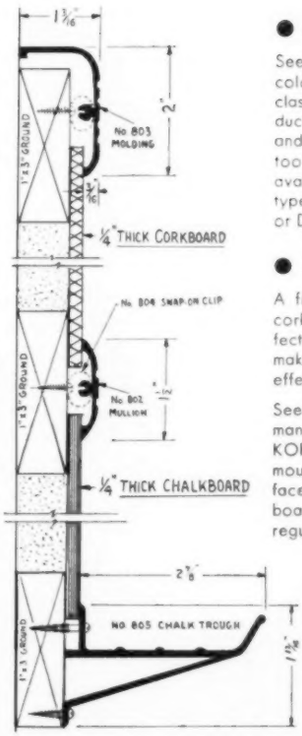
see our catalog in ARCHITECTURAL FILE or write for copy

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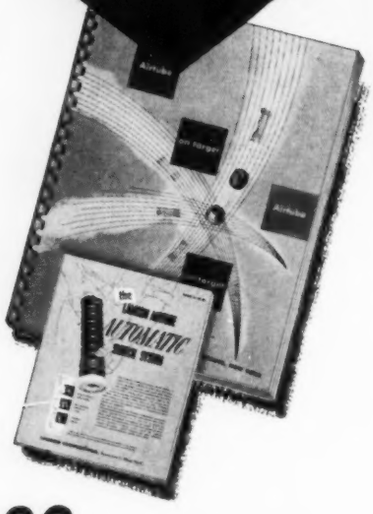
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THE RECORD REPORTS

(*Continued from page 368*)



CONSTRUCTION UNDER WAY FOR PRUDENTIAL OFFICES

Ground was broken in May for a new headquarters building in Jacksonville, Fla., for the Prudential Insurance Company of America's South-Central district. Architects for the project are Kemp, Bunch and Jackson of Jacksonville. Cost is estimated at $10 million.

The 22-story building is being built on a 13-acre site on the south bank of the St. John's River. Only one and a half acres of the plot will be required by the building, the rest of the site being set aside for landscaped walks, a riverfront promenade and a recreation center. In addition, a six-acre plot next to this site will provide parking space for 750 cars.

The building, to be 300 feet high, will contain approximately 400,000 sq ft of office space; Prudential will use the eight-story north wing. The frame of the building will be riveted structural steel, and the floors will be cellular steel with a cement topping. Facing is to be limestone and granite.





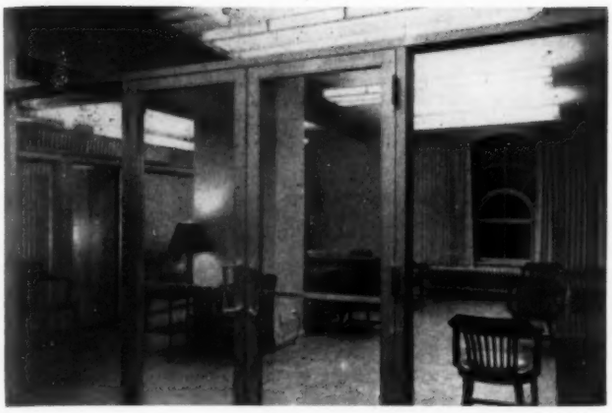
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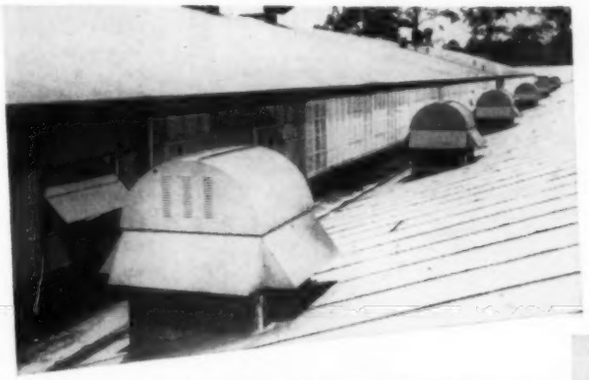
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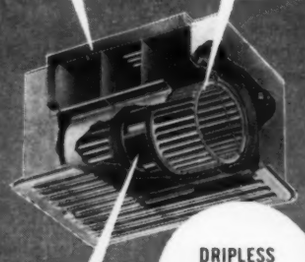
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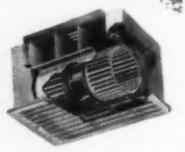
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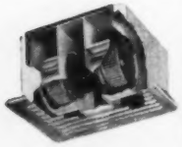




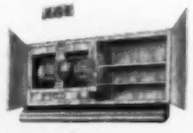
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REQUIRED READING

(*Continued from page 48*)

Egyptian Debtor's Prison of 1835. Unusual too, is the Floating Church of the Redeemer. Built by Clement L. Dennington at Bordentown, it was moored at the foot of Dock Street for use of seamen in the port of Philadelphia. John Notman's Philadelphia Athenaeum was an example of the revival of the Italian palazzo façade, and Napoleon Lebrun's Neo-Baroque Academy of Music prefaced the domination of the French Renaissance style.

By the last quarter of the century, feeling of the individual was beginning to assert itself. While no single name, perhaps, is identified with Philadelphia as Richardson with Boston, or Hunt with New York, buildings such as the old Broad Street Station and the Pennsylvania Academy of Fine Arts, never-theless bear the indelible stamp of Frank Furness.

As the century drew to a close, the styles developed to conform in ornament and detail to historical precedents, while the architect adapted design and materials to the increasingly complex needs of an expanding culture. Furness' Tradesmen's National Bank and Trust Company and the Clearing House are outstanding solutions of commercial and industrial problems; John Windrim's Philadelphia Electric Company Power Station is a worthwhile example of functional architecture; while the University Museum of Wilson Eyre and Frank Miles Day exemplifies outstanding architecture at the end of the century.

This and much more is the catalog of the Art Alliance exhibit. David M. Robb's chronicle of the architectural development of the city, with William P. Harbeson's delightful cultural and social portrait and John C. Wells' remarkable photographs combine to make the book a splendid presentation of the exhibit as well as a document of architectural and social importance.

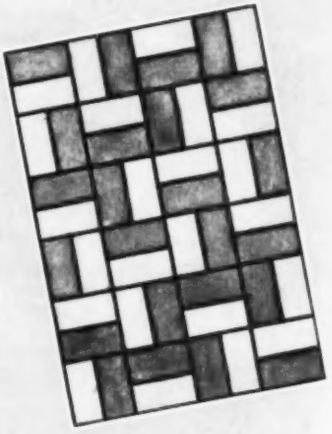
THE SCIENCE OF COLOR

Color in Business, Science and Industry. By Deane B. Judd. John Wiley & Sons, Inc. (440 Fourth Ave., New York 16, N. Y.) 1953. 6 by 9¼ in. 401 pp.

A highly technical and informative work, this book is recommended for anyone connected with the science of color — specifically, industrial psychologists, artists, designers. Answering scores of questions related to the science of color,

(*Continued on page 380*)

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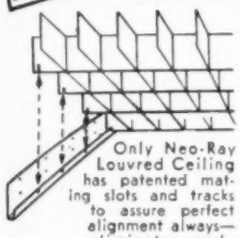


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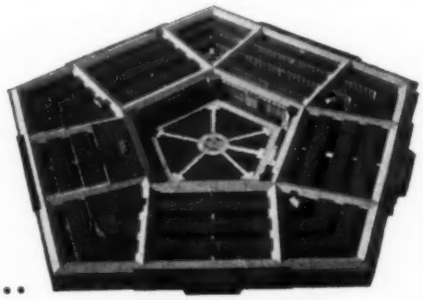
See our catalog in Sweet's Architectural File for 1953 sec. 30g NE

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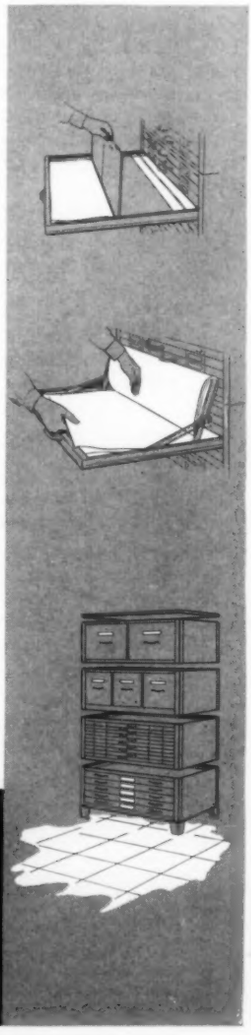
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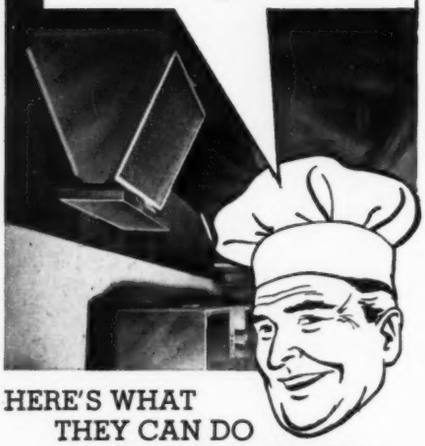
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REQUIRED READING

(*Continued from page 376*)

the study involves the psychophysics of color in practical use, regarding purchase, production and sale of goods whose physical properties rely on color for efficiency and price. The book is generously treated with graphs and tables which depict reflectivity, chromaticity, etc., and the effect on color due to addition and rapid succession of lights is explained.

The author, who has been associated with the National Bureau of Standards for the past twenty years, has attacked — and conquered — a most vital aspect of today's commercial and industrial needs. Jeanne Whitbeck.

PRESTRESSED CONCRETE

Prestressed Concrete. By Kurt Billig. D. Van Nostrand Company, Inc. (250 Fourth Ave., New York, N. Y.) 1953. 6 by 9 in. 470 pp., illus.

Like most of the preceding authors of books on prestressed concrete, Professor Billig brings to this writing a great deal of actual experience in prestressing design and construction. Intended primarily for use as a text, this book covers a wider range of subjects than previous ones, and has the added advantage that each chapter is well-annotated. Like earlier books this one still is aimed primarily at the specialist although it, too, represents a valuable reference for anyone interested in prestressed concrete.

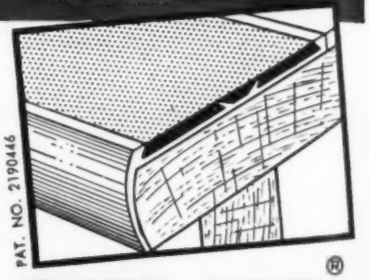
The first part has general data and fundamentals including past history, various methods of prestressing and specifications of materials. Part Two takes up the actual design of prestressed structures and considers such subjects as "Design Assumptions," "Loss of Prestress," "End Anchorages," "Diagonal Tensions," "Factor of Safety" and "Notations." The third part deals with practical design problems including both precast and cast-in-place structures. In each case a particular problem is calculated in detail. Some of these structures are box girders, road bridges, transmission line poles, airplane runways and storage tanks.

The book's illustrations quite adequately cover the points the author wishes to make but unfortunately the photographs underplay the drama inherent in prestressed structures.

(*Continued on page 384*)

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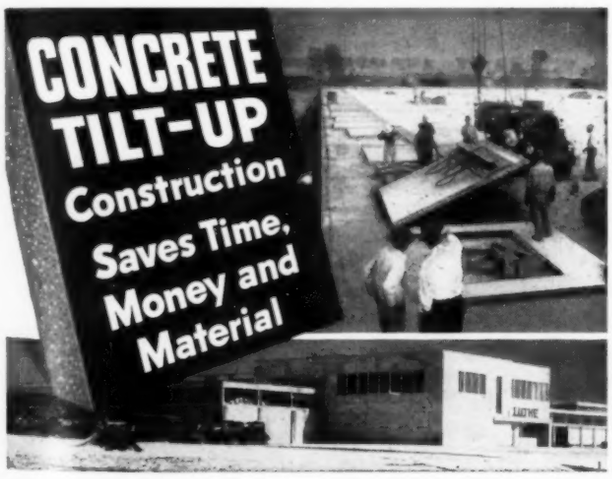


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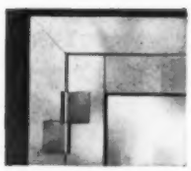
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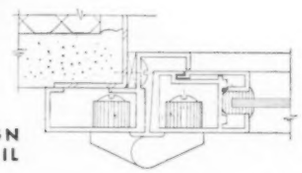


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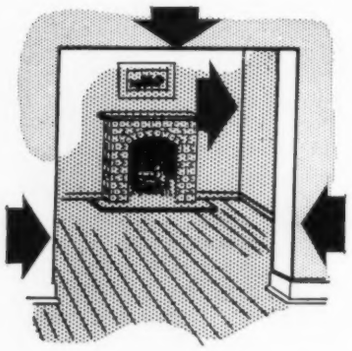
DESIGN DETAIL

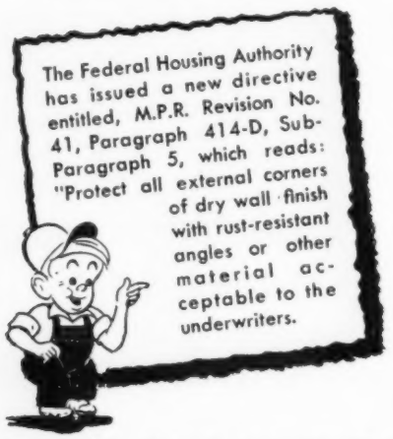
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REQUIRED READING

(*Continued from page 380*)

BOOKS RECEIVED

American School and University Handbook, 1953–1954. Volume 25. Walter D. Cocking, Editor. American School Publishing Corporation. (470 Fourth Ave., New York 16, N. Y.) 1953. 8½ by 11¼ in., 1060 pp., illus.

Architecture Through the Ages. By Talbot Hamlin. Revised Edition. G. P. Putnam's Sons. (210 Madison Ave., New York, N. Y.) 1953. 6½ by 9½ in. 684 pp., illus.

The Art and Architecture of India — Buddhist, Hindu, Jain. By Benjamin Rowland. The Pelican History of Art. Penguin Books, Inc. (3300 Clipper Mill Rd., Baltimore, Md.) 1953. 7½ by 10½ in. 280 pp. text; 190 pp. plates.

Automatic Control of Heating and Air Conditioning. By John E. Haines. McGraw-Hill Book Company, Inc. (330 West 42nd St., New York, N. Y.) 1953. 370 pp. 6¼ by 9¼ in., illus.

The City of Man. By Christopher Tunnard. Charles Scribner's Sons. (597 Fifth Ave., New York 17, N. Y.) 1953. 6½ by 9½ in. 424 pp., illus.

City Planning in Soviet Russia. By Maurice F. Parkins. The University of Chicago Press. (5750 Ellis Ave., Chicago 37, Ill.) 7¼ by 9¾ in. 257 pp., illus.

European Architecture in the Twentieth Century, Volume Two, Part Three, The Era of Functionalism, 1924–1933. By Arnold Whittick. Crosby Lockwood & Son, Ltd. (39 Thurloe St., S.W. 7, London, England) 1953. 7¾ by 10 in. 271 pp., illus.

Fatigue of Metals. By R. Cazaud. Translated by A. J. Fenner. Philosophical Library. (15 East 40th St., New York 16, N. Y.) 1953. 6¼ by 10 in. 334 pp., illus.

Fenster: Aus Holz und Metall. Konstruktion und Maueranschlag. By Adolf G. Schneck. Julius Hoffmann. (Stuttgart, Germany) 1953. 9 by 12 in. 195 pp., illus.

Housebuilding in Transition. By Sherman J. Maisel. University of California Press. (Berkeley and Los Angeles, Calif.) 1953. 6½ by 9½ in. 390 pp.

Manual of Precast Concrete Construction. By F. Thomas Collins. 1953. 8¾ by 11½ in. 71 pp., illus.

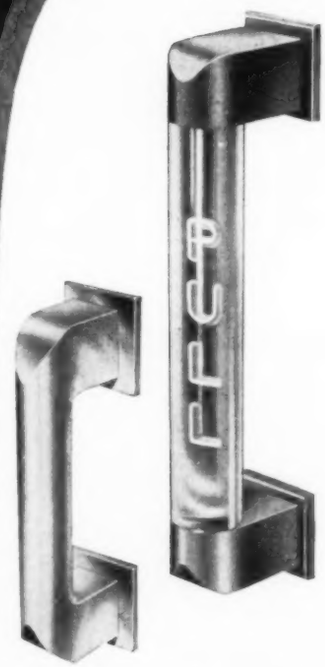
Painting in Britain, 1530 to 1790. By Ellis Waterhouse. The Pelican History of Art. Penguin Books, Inc. (3300 Clipper Mill Rd., Baltimore, Md.) 1953. 7½ by 10½ in. 271 pp. text; 192 pp. plates.

Public Grounds Maintenance Handbook. By H. S. Conover. Tennessee Valley Authority Division of Reservoir Properties. (Knoxville, Tenn.) 1953. 8 by 10½ in. 495 pp., illus.

The Role of Federal Credit Aids in Residential Construction. By Leo Grebler. University Studies in Capital Formation and Financing. Occasional Paper 39. National Bureau of Economic Research, Inc. 1953. 6 by 9 in., 76 pp.

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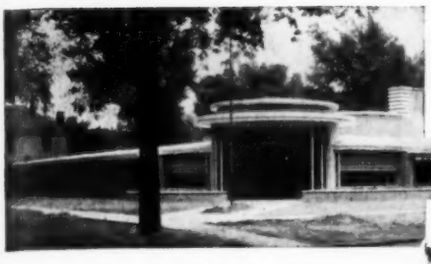
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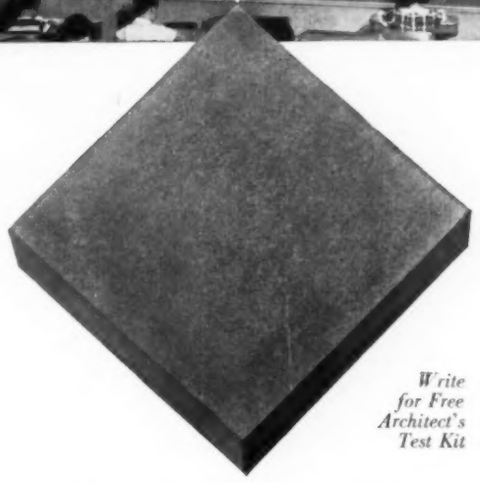
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For details see Sweet's 1952 Architectural File



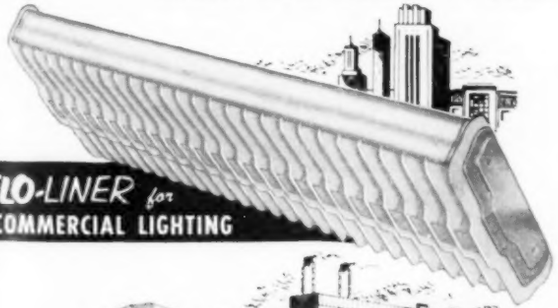
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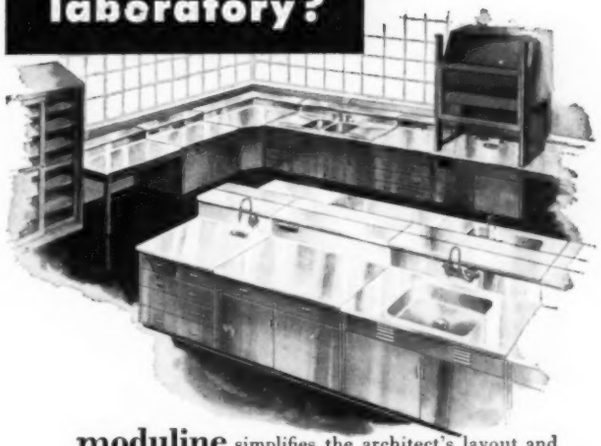
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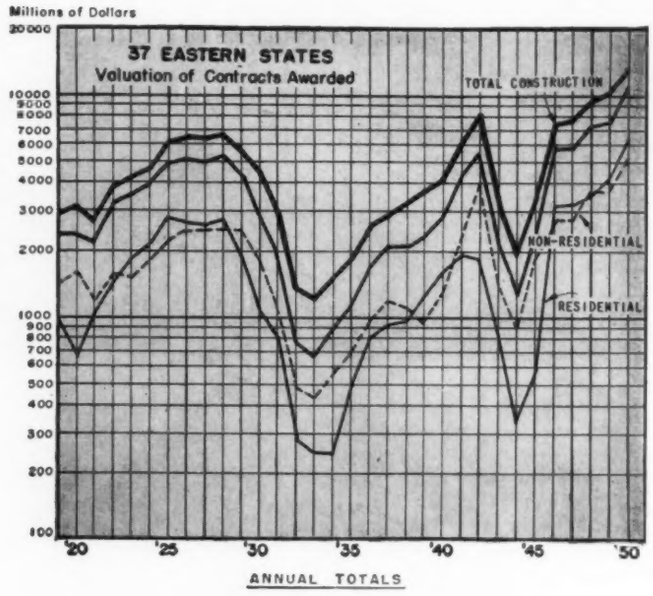
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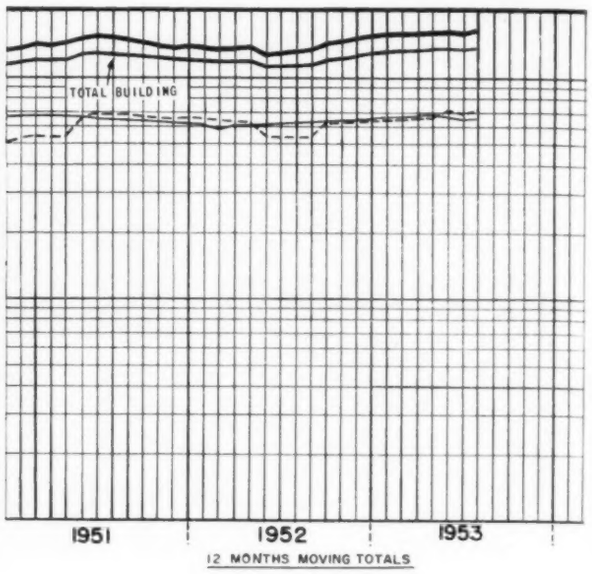
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State_____

CURRENT TRENDS IN CONSTRUCTION

Charts by Dodge Statistical Research Service





CONTRACTS TAKE SHARP UPTURN

Construction contract awards as reported by the F. W. Dodge Corporation showed a surprising contra-seasonal upturn in July over June and also recorded a sharp increase over July 1952.

The July increases reversed the slight downward turn indicated in the June contract awards and brought totals for the first seven months of 1953 to new highs.

Nearly all categories of construction shared in the upturn. Commercial building led with a 117 per cent increase: — from $92,221,000 in July '52 to $200,133,000 in July '53. Manufacturing buildings increased from $139,941,000 to $206,702,000. Schools, religious buildings and social-recreational buildings all registered substantial gains.

Residential building contracts, which had been running slightly under '52 levels, turned upward with a 7½ per cent increase over July last year: from $608,078,000 to $653,407,000.

Total building contracts for July were $1,417,800,000 compared with $1,170,764,000 last year. For the first seven months, the total valuation was $7,628,327,000 as compared to last year's record-breaking $7,213,776,000 — a gain of 5.7 per cent.

SCHOOL & COLLEGE BUILDING CONSTRUCTION—1947–1953

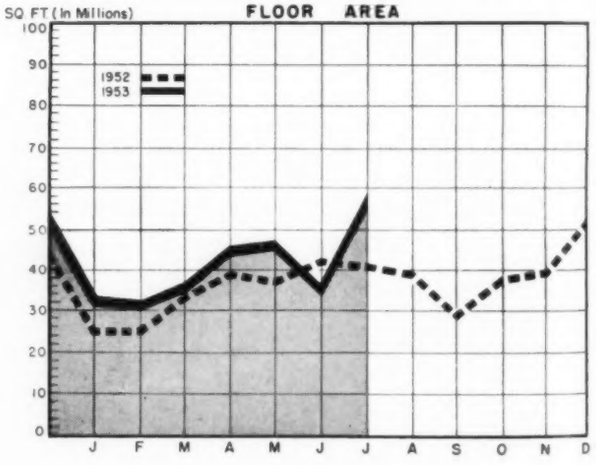
Contracts Awarded—Millions of Dollars (37 Eastern States)

Year	Annual Total	Monthly Average	Year	Annual Total	Monthly Average
1947	316	26	1950	1077	90
1948	595	50	1951	1184	99
1949	748	62	1952	1306	109

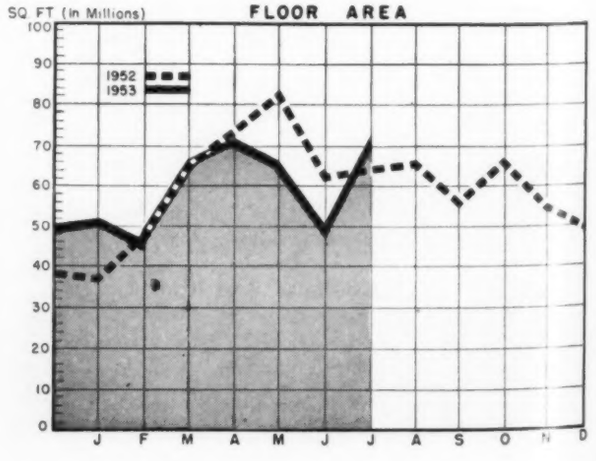
Monthly Totals

1952				1953			
Jan.	89	July	111	Jan.	92	July	156
Feb.	99	Aug.	130	Feb.	91	7 mos.	883
Mar.	106	Sept.	79	Mar.	118		
Apr.	111	Oct.	115	Apr.	134		
May	126	Nov.	94	May	153		
June	114	Dec.	131	June	139		

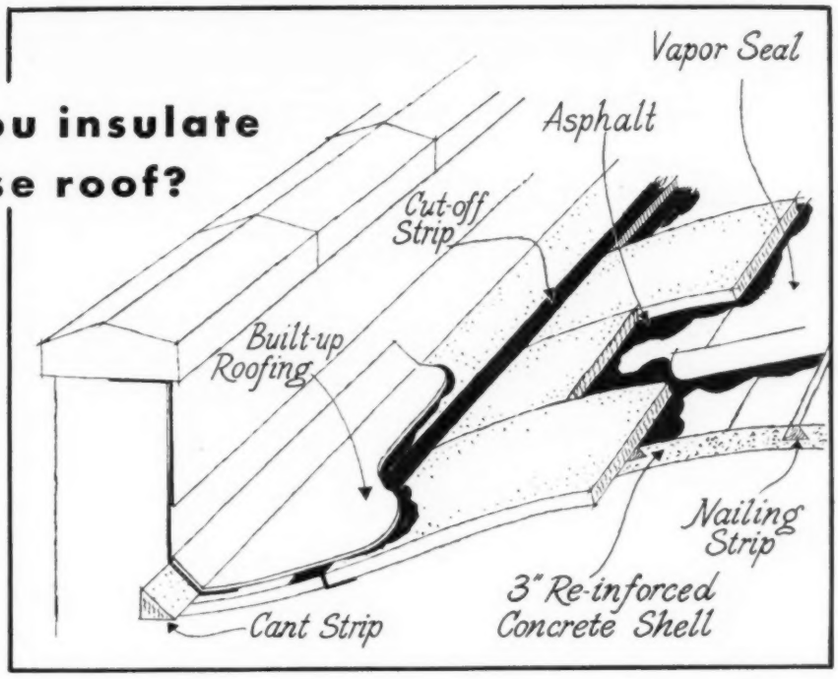
NONRESIDENTIAL BUILDING (37 EASTERN STATES)



RESIDENTIAL BUILDING (37 EASTERN STATES)



How would you insulate this field house roof?



PROBLEM:

A college field house is being planned for a region where the design temperature is 20° F. below zero. The building will be heated in winter, and temperatures under the roof will go to 70° or 75° F. Relative humidity may be as high as 65%. What roof insulation would you specify over the 3" concrete shell?

SOLUTION:

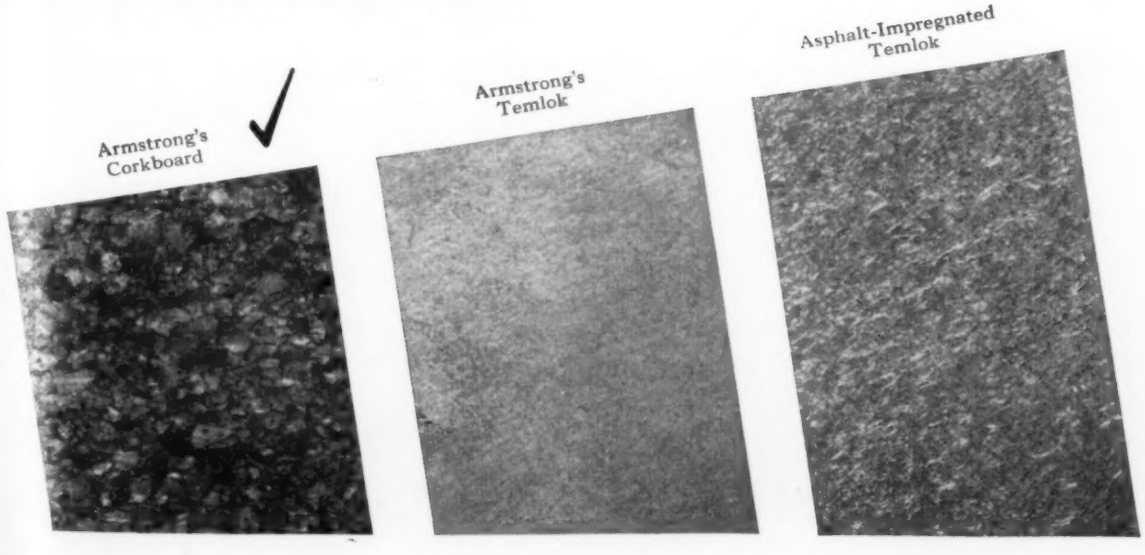
In selecting the proper insulation for this roof, two factors were important. First, while the daily average humidity would be low, the insulation had to be chosen to prevent condensation during the periods of peak humidity encountered when a large audience was present. Second, the shell-type roof demanded a flexible insulating material that would conform to its curvature.

To meet these requirements, the architect chose a 1½" thickness of Armstrong's Corkboard. Applied over a vapor seal, this thickness will give the roof the resistance factor needed to assure dry ceilings and comfortable temperatures. Corkboard's flexibility and natural resilience allow it to conform to the curvature of the roof.

Armstrong's Corkboard, applied in accordance with Armstrong's specifications, is a regular choice of architects and engineers when dependable, long-lasting roof insulation is needed. Made entirely of pure cork granules, its cellular structure means high insulating efficiency and great resistance to moisture.

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